

Table C2.3-1. Evaluation of Sites for Inclusion in the Round 2 Groundwater Pathway Assessment.

Facility	Criteria ^a				Site Meets One or More Inclusion Criteria				
	Criterion 1: Offshore data indicate a potentially complete pathway to the river.		Criterion 2: Shoreline data indicate a reasonable likelihood of a complete pathway to the river.						
EVRAZ OREGON STEEL MILLS	No	No offshore groundwater sampling has occurred at this site.	No	Petroleum-related chemicals are below levels of concern in site beach wells, indicating an incomplete pathway. As and Mn are present in beach wells, but are at concentrations that are comparable to background levels in TZW at other GWPA study area sites.	No	NAPL has not been reported at the site.	No	No surface expressions of groundwater in a human use beach area.	No
TIME OIL	No	No offshore groundwater sampling has occurred at this site.	No	BTEX, PAHs and most metals are very low to nondetect in beach wells. Total Cu and Cr slightly exceeded site-specific background concentrations, but dissolved concentrations below screening levels established for the site.	No	Though NAPL has been observed in upland wells, it has not been observed in nearshore wells nor has NAPL seepage to the river been observed.	No	No surface expressions of groundwater in a human use beach area.	No
SCHNITZER INVESTMENT CORP. (PEO)	No	No offshore groundwater sampling has occurred at this site.	Uncertain	Petroleum-related contamination present at low levels in nearshore wells at south end of site--suggesting that the groundwater pathway may be complete. Additional characterization efforts are ongoing at the site.	No	Though NAPL has been observed in nearshore wells, NAPL seepage to the river has not been observed.	No	No surface expressions of groundwater in a human use beach area.	Uncertain. Additional uplands characterization is ongoing.
KINDER MORGAN	No	No offshore groundwater sampling had occurred at this site at the time of the site selection analysis.	No	Downgradient monitoring points do not show elevated levels of site chemicals.	Yes	NAPL seepage to river is currently addressed by ongoing containment system.	No	No surface expressions of groundwater in a human use beach area.	Yes
ARCO	No	No offshore groundwater sampling had occurred at this site at the time of the site selection analysis.	Yes	PAHs and metals present in shoreline wells and borings.	Yes	Product recovery system generally contains the LNAPL discharge to the river.	No	No surface expressions of groundwater in a human use beach area.	Yes
EXXONMOBIL	No	No offshore groundwater sampling had occurred at this site at the time of the site selection analysis.	Yes	Pb and Zn present in shoreline wells.	No	Product recovery system present and only trace NAPL has been observed in upland areas since 2001.	No	No surface expressions of groundwater in a human use beach area.	Yes
GASCO	No	No offshore groundwater sampling had occurred at this site at the time of the site selection analysis.	Yes	BTEX, PAHs, and cyanide present in nearshore wells.	No	A recent NAPL investigation concluded that the DNAPL present under the former tar pond area is not currently and has not in the past discharged to the Willamette River sediments.	No	No surface expressions of groundwater in a human use beach area.	Yes
SILTRONIC	Yes	In-water Geoprobe® sampling data demonstrates the presence of site chemicals in offshore groundwater.	Yes	HVOCS, MTBE, and petroleum-related compounds present in nearshore groundwater.	No	DNAPL identified 110-125 ft bgs. However, NAPL discharge to the river has not been observed.	No	No surface expressions of groundwater in a human use beach area.	Yes
RHONE POULENC	No	No offshore groundwater sampling had occurred at this site at the time of the site selection analysis.	Yes	HVOCS, insecticides (e.g., DDT), herbicides (Silvex, 2,4-D), metals, and dioxins/furans present in shoreline wells.	No	NAPL has not been detected closer than 1800 ft from the river.	Yes	Groundwater infiltration to a city sewer has resulted in detections of pesticides and metals in the stream originating from the sewer outfall.	Yes
ARKEMA	Yes	Cr, perchlorate, DDT, and MCB detected in unfiltered water samples collected from in-water Geoprobe® borings. (The unfiltered Geoprobe® samples may be significantly high-biased by the introduction of sediment particulates during sampling; see Section 3.1.1.)	Yes	DDT, MCB, Cr(VI), perchlorate present in shoreline wells.	No	DNAPL is residualized and thus not likely to migrate to the river.	No	No surface expressions of groundwater in a human use beach area.	Yes
WILLBRIDGE	No	No offshore groundwater sampling had occurred at this site at the time of the site selection analysis.	Yes	Petroleum-related contamination present in shoreline wells.	Yes	Seepage of NAPL to the river has been reported at the 27-inch sewer. Cutoff wall design to eliminate this seepage is underway.	No	No surface expressions of groundwater in a human use beach area.	Yes
GUNDERSON	No	No offshore groundwater sampling had occurred at this site at the time of the site selection analysis.	Yes	HVOCS and metals present in shoreline wells at Area 1. Metals present in shoreline wells in Area 3.	No	NAPL has not been reported at the site.	No	No surface expressions of groundwater in a human use beach area.	Yes

Notes:

^aThe full site inclusion criteria are as follows:

Criteria 1: Offshore groundwater sampling data demonstrate that a complete transport pathway exists for groundwater COIs* to reach in-river exposure points.

Criteria 2: Shoreline sampling data from groundwater wells or seeps indicate that a complete transport pathway may exist for groundwater COIs* to reach in-river exposure points.

Criteria 3: Observations of NAPL seepage to the river indicate that a complete transport pathway may exist for groundwater COIs* to reach in-river exposure points.

Criteria 4: Shoreline groundwater seeps are present and represent a potentially complete transport pathway for groundwater COIs to reach potential human exposure points.

* including facilitated transport of PCBs due to cosolvency effects

BTEX - benzene, toluene, ethylbenzene, and xylenes

COI - contaminant of interest

GWPA - groundwater pathway assessment

HVOC - halogenated organic compound

MCB - monochlorobenzene

MTBE - methyl tert-butyl ether

NAPL - non-aqueous phase liquid

PAH - polycyclic aromatic hydrocarbon

PCB - polycyclic aromatic hydrocarbon

TZW - transition zone water

Table C3.0-1. Transition Zone Water Sample Counts.

Analyte	Depth	Sampling Method	Upland Site									
			ARCO	Arkema - Acid Plant	Arkema - Chlorate Plant	ExxonMobil	Gasco	Gunderson	Kinder Morgan	Rhone Poulenc	Siltronic	Willbridge
SVOCs	< 38 cm	Trident - Unfiltered	6	5	5	10	4	2	3	7	5	5
		Peeker	1	5	3		2	5	4	1	6	2
		Push Probe - Unfiltered									41	
PCDD/Fs	> 38 cm	Trident - Unfiltered	2	3	3	3	2	3	1	3	2	
		Push Probe - Unfiltered				22					24	
DDx Pesticides	< 38 cm	Trident - Filtered								2		
		Trident - Unfiltered								2		
	> 38 cm	Trident - Filtered								1		
		Trident - Unfiltered		3						1		
Metals	< 38 cm	Trident - Filtered	8	3	5	10	3	2	2	6	5	5
		Trident - Unfiltered	9	4	5	10	4	2	2	7	5	5
		Peeker	4	2	3		2	5	4	1	6	2
		Push Probe - Unfiltered									13	
	> 38 cm	Trident - Filtered	2			3		2		2	1	
		Trident - Unfiltered	2	3	3	3	1	3	1	3	2	
		Push Probe - Filtered					4					
		Push Probe - Unfiltered				22						
VOCs	< 38 cm	Trident - Unfiltered	9	8	5	10	4	2	3	7	5	5
		Peeker	4	5	3		2	5	4	1	6	2
		Push Probe - Unfiltered									41	
> 38 cm	Trident - Unfiltered	2	3	3	3	2	22	3	1	3	2	
	Push Probe - Unfiltered										24	
PAHs	< 38 cm	Trident - Filtered	9			8	3		2		5	4
		Trident - Unfiltered	9			10	4		2		5	5
		Peeker	4				2		4		6	2
		Push Probe - Unfiltered									13	
	> 38 cm	Trident - Filtered	2			1		1			2	
		Trident - Unfiltered	2			3		22				
		Push Probe - Unfiltered										

Table C3.0-1. Transition Zone Water Sample Counts.

Analyte	Depth	Sampling Method	Upland Site									
			ARCO	Arkema - Acid Plant	Arkema - Chlorate Plant	ExxonMobil	Gasco	Gunderson	Kinder Morgan	Rhone Poulenc	Siltronic	Willbridge
Herbicides	< 38 cm	Trident - Filtered Trident - Unfiltered Peeper								5 6 1		
	> 38 cm	Trident - Filtered Trident - Unfiltered								1 2		
Conventional	< 38 cm	Trident - Filtered Trident - Unfiltered Peeper	3 5 3	3 5 2	4 9 3	10	4 1	2 5	2 4	7 1	5 6	5 2
	> 38 cm	Trident - Filtered Trident - Unfiltered Push Probe - Unfiltered	2	3	1 4	3	1	3		3	2 21	

Notes:

PAH - polycyclic aromatic hydrocarbon

PCDD/F - dioxin/furan

SVOC - semivolatile organic compound

VOC - volatile organic compound

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Table C3.0-2. Transition Zone Water and Bulk Sediment Replicate Analysis Results

Sample ID (replicate pair)	Sample Type	ICC (Intra Class Correlation)	Pearson's Correlation
LWG2-T30-AP3A-Filt	Trident - Filtered	0.998	0.999
LWG2-T30-AR1A-FILT	Trident - Filtered	0.995	0.999
LWG2-T30-CP9A-filt	Trident - Filtered	0.999	1
LWG2-T30-EM3A-Filt	Trident - Filtered	0.739	0.914
LWG2-T30-GS2A-FILT	Trident - Filtered	1	0.999
LWG2-T30-R2EM1-Filt	Trident - Filtered	1	0.999
LWG2-T30-R2KM1-Filt	Trident - Filtered	0.998	0.999
LWG2-T30-RP7B-FILT	Trident - Filtered	1	0.999
LWG2-T30-SL3A-FILT	Trident - Filtered	1	0.999
LWG2-T30-W12A-Filt	Trident - Filtered	1	0.999
LWG2-T90-GN5A-Filt	Trident - Filtered	1	0.999
LWG2-T90-R2AR2-FILT	Trident - Filtered	1	0.999
LWG2-T30-AP3A	Trident - Unfiltered	0.999	0.999
LWG2-T30-AR1A	Trident - Unfiltered	0.987	0.998
LWG2-T30-CP9A	Trident - Unfiltered	1	1
LWG2-T30-GN4A	Trident - Unfiltered	0.998	0.999
LWG2-T30-GS2A	Trident - Unfiltered	1	0.999
LWG2-T30-R2EM1	Trident - Unfiltered	1	0.999
LWG2-T30-R2KM1	Trident - Unfiltered	0.977	0.998
LWG2-T30-RP7B	Trident - Unfiltered	0.999	0.999
LWG2-T30-SL3A	Trident - Unfiltered	0.951	0.998
LWG2-T30-W12A	Trident - Unfiltered	1	0.999
LWG2-T90-EM3A	Trident - Unfiltered	1	0.999
LWG2-T90-GN5A	Trident - Unfiltered	0.999	0.999
LWG2-T90-R2AR2	Trident - Unfiltered	0.999	0.999
LWG2-P-AR04B	Peeker	0.97	0.99
LWG2-P-CP09D	Peeker	0.996	1
LWG2-P-GN2E	Peeker	1	0.999
LWG2-P-GSC7D	Peeker	0.999	0.999
LWG2-P-KM11B	Peeker	0.962	0.999
LWG2-P-R2AP1	Peeker	0.948	0.979
LWG2-P-RP7E	Peeker	0.942	0.948
LWG2-P-SLT3F	Peeker	0.995	0.999
LWG2-P-W4C	Peeker	0.953	0.976
LWG2-PG-AP4C	Sediment	0.997	0.99
LWG2-PG-GN5A	Sediment	0.999	0.99
LWG2-PG-GS4A	Sediment	0.763	0.997
LWG2-PG-R2AR1	Sediment	0.994	0.999

Table C3.0-3. Major Ion Composition Data for Transition Zone Water, Groundwater, and Willamette River Water.

Sample	Water Type	Na (meq/l)	K (meq/l)	Ca (meq/l)	Mg (meq/l)	Cl (meq/l)	SO ₄ (meq/l)	HCO ₃ (meq/l)	Sum of Anions (meq/l)	Sum of Cations (meq/l)	Electroneutrality (%)
ARCO											
AR-01-A, Trident 150 cm	TZW from Groundwater Discharge Zone	0.78	0.17	5.84	2.41	0.17	0.00	7.09	7.27	9.20	-12
AR-01-A, Trident 30 cm	TZW from Groundwater Discharge Zone	0.43	0.09	1.96	0.85	0.12	0.07	2.40	2.59	3.33	-13
AR-02-B GeoProbe 3'-5' GW	TZW from Low-to-No Groundwater Discharge Zone	1.01	0.09	4.26	1.61	0.17	0.00	6.01	6.18	6.97	-6
AR-03-B GeoProbe 3'-5' GW	TZW from Low-to-No Groundwater Discharge Zone	0.27	0.02	0.39	0.19	0.14	0.09	0.75	0.99	0.87	6
AR-06-B GeoProbe 3'-5' GW	TZW from Low-to-No Groundwater Discharge Zone	0.85	0.08	2.56	1.24	0.12	0.06	3.24	3.43	4.74	-16
R2-AR-01, Trident 30 cm	TZW from Low-to-No Groundwater Discharge Zone	0.64	0.11	4.15	1.41	0.12	0.00	5.73	5.85	6.31	-4
R2-AR-02, Trident 30 cm	TZW from Low-to-No Groundwater Discharge Zone	0.80	0.12	3.67	1.72	0.23	0.01	4.94	5.18	6.31	-10
R2-AR-02, Trident 90 cm	TZW from Low-to-No Groundwater Discharge Zone	0.70	0.09	3.78	1.19	0.23	0.00	4.88	5.12	5.76	-6
R2-AR-03, Trident 30 cm	TZW from Low-to-No Groundwater Discharge Zone	0.25	0.04	0.66	0.45	0.16	0.01	0.98	1.14	1.40	-10
R2-AR-04, Trident 30 cm	TZW from Low-to-No Groundwater Discharge Zone	0.60	0.09	1.62	0.92	0.18	0.07	2.65	2.90	3.22	-5
MW-02 Upland GW	Upland Groundwater	0.41	0.03	0.66	0.84	0.07	0.03	0.75	0.84	1.94	-39
MW-05 Upland GW	Upland Groundwater	0.34	0.07	0.89	0.84	0.11	0.44	0.65	1.20	2.14	-28
MW-08 Upland GW	Upland Groundwater	0.43	0.09	3.63	0.84	0.10	0.02	3.94	4.06	5.00	-10
Arkema											
AP-02-A, Trident 30 cm	TZW from Groundwater Discharge Zone	0.90	0.10	5.19	2.30	1.76	0.01	5.35	7.13	8.50	-9
AP-02-D, Trident 30 cm	TZW from Groundwater Discharge Zone	25.66	0.19	6.74	3.97	25.75	0.00	7.57	33.33	36.56	-5
AP-03-A, Trident 150 cm	TZW from Groundwater Discharge Zone	30.32	0.72	12.97	124.25	101.83	8.77	24.34	134.99	168.27	-11
AP-03-A, Trident 30 cm	TZW from Groundwater Discharge Zone	17.09	0.30	8.03	42.79	49.08	0.01	8.51	57.61	68.22	-8
AP-03-A, Trident 30 cm; FR	TZW from Groundwater Discharge Zone	16.40	0.29	7.49	40.90	47.67	0.01	8.84	56.53	65.07	-7
AP-03-B, Trident 30 cm (PS)	TZW from Groundwater Discharge Zone	7.79	0.20	6.24	61.14	85.75	0.57	2.64	88.96	75.36	8
AP-03-B, Trident 30 cm (PS); FR	TZW from Groundwater Discharge Zone	5.61	0.17	9.73	41.14	36.67	0.01	3.18	39.86	56.66	-17
AP-03-D, Trident 150 cm	TZW from Groundwater Discharge Zone	25.71	0.26	13.17	8.39	35.54	14.85	0.69	51.08	47.53	4
AP-04-B, Trident 30 cm (PS)	TZW from Groundwater Discharge Zone	25.66	0.16	14.02	31.43	66.85	1.46	25.98	94.29	71.28	14
AP-04-C, Peeper 0 - 38 cm	TZW from Groundwater Discharge Zone	0.15	0.01	0.44	0.33	0.05	0.01	2.02	2.08	0.93	38
CP-06-A, Trident 150 cm	TZW from Groundwater Discharge Zone	365.81	0.41	0.81	0.60	153.73	2.63	11.80	168.16	367.64	-37
CP-06-A, Trident 30 cm	TZW from Groundwater Discharge Zone	49.15	0.19	0.38	0.24	34.41	0.55	7.80	42.78	49.96	-8
CP-06-C, Trident 30 cm (PS)	TZW from Groundwater Discharge Zone	754.68	1.64	34.13	23.21	863.12	0.09	5.18	868.39	813.66	3
CP-07-A, Trident 30 cm	TZW from Groundwater Discharge Zone	335.80	0.39	0.71	0.51	261.76	5.79	12.24	279.84	337.42	-9
CP-07-B, Trident 150 cm	TZW from Groundwater Discharge Zone	403.66	0.52	2.31	2.12	338.48	5.31	8.54	352.42	408.61	-7
CP-07-B, Trident 30 cm	TZW from Groundwater Discharge Zone	444.98	0.58	1.14	0.76	358.22	6.08	9.26	373.59	447.46	-9
CP-07-B, Trident 30 cm (PS)	TZW from Groundwater Discharge Zone	339.72	0.72	0.57	0.59	236.09	5.02	18.43	259.54	341.60	-14
CP-07-B, Trident 30 cm (PS); FR	TZW from Groundwater Discharge Zone	344.50	0.70	0.51	0.49	256.40	4.52	17.29	278.21	346.19	-11
CP-07-B, Trident 60 cm (PS)	TZW from Groundwater Discharge Zone	387.56	0.45	0.50	0.63	318.73	4.90	13.71	337.34	389.14	-7
CP-07-D, Peeper 0 - 38 cm	TZW from Groundwater Discharge Zone	1630.73	2.36	5.94	6.19	1458.28	10.10	3.84	1472.23	1645.21	-6
CP-07-D, Trident 150 cm	TZW from Groundwater Discharge Zone	1279.70	1.65	3.41	3.95	1170.57	9.35	5.53	1185.47	1288.71	-4
CP-08-B, Trident 30 cm	TZW from Groundwater Discharge Zone	377.12	0.30	0.55	0.64	279.53	5.58	7.56	292.68	378.62	-13
CP-08-D, Trident 30 cm (PS)	TZW from Groundwater Discharge Zone	2551.14	2.32	19.16	11.44	2496.28	0.47	10.39	2507.15	2584.06	-2
CP-09-A, Trident 30 cm	TZW from Groundwater Discharge Zone	301.00	0.31	2.33	0.91	244.27	2.58	5.44	252.31	304.55	-9
CP-09-A, Trident 30 cm; FR	TZW from Groundwater Discharge Zone	291.87	0.30	2.05	0.75	252.45	2.63	5.40	260.49	294.98	-6
CP-10-A, Trident 30 cm (PS)	TZW from Groundwater Discharge Zone	1264.48	0.68	3.89	4.14	1004.16	0.19	7.47	1011.82	1273.18	-11
R2-AP-01, Peeper 0 - 38 cm	TZW from Groundwater Discharge Zone	0.36	0.05	0.48	7.54	0.31	0.01	10.16	10.63	8.42	12
R2-AP-01, Peeper 0 - 38 cm; FR	TZW from Groundwater Discharge Zone	0.39	0.05	1.06	5.63	0.37	0.01	8.31	8.77	7.13	10
R2-AP-02, Trident 150 cm	TZW from Groundwater Discharge Zone	286.65	0.76	13.92	141.53	332.84	46.67	16.38	395.95	442.86	-6
R2-AP-02, Trident 30 cm	TZW from Groundwater Discharge Zone	405.40	0.51	16.42	47.56	409.00	5.50	19.83	434.40	469.88	-4
R2-CP-01, Peeper 0 - 38 cm	TZW from Groundwater Discharge Zone	640.28	4.96	38.43	25.26	552.85	4.96	7.38	565.21	708.93	-11
AP-04-D, Trident 30 cm (PS)	TZW from Low-to-No Groundwater Discharge Zone	26.62	0.17	12.08	6.26	32.44	0.01	11.69	44.14	45.12	-1
CP-09-D, Peeper 0 - 38 cm	TZW from Low-to-No Groundwater Discharge Zone	1087.44	1.22	8.18	6.25	820.81	0.98	6.70	828.51	1103.09	-14

Table C3.0-3. Major Ion Composition Data for Transition Zone Water, Groundwater, and Willamette River Water.

Sample	Water Type		Na (meq/l)	K (meq/l)	Ca (meq/l)	Mg (meq/l)	Cl (meq/l)	SO ₄ (meq/l)	HCO ₃ (meq/l)	Sum of Anions (meq/l)	Sum of Cations (meq/l)	Electroneutrality (%)
CP-09-D, Peeper 0 - 38 cm; FR	TZW from Low-to-No Groundwater Discharge Zone	990.88	1.02	6.84	5.38	727.73	1.08	5.48	734.31	1004.11	-16	
WB-01 (-11.4 to -15.4) GW	Upland Groundwater	52.20	0.38	4.29	4.85	2.82	31.25	9.01	43.08	61.73	-18	
WB-01 (3.6 to -0.4) GW	Upland Groundwater	6.09	0.59	7.49	10.70	0.71	2.71	1.13	4.54	24.86	-69	
WB-02 (-0.3 TO -4.3) GW	Upland Groundwater	10.44	0.28	6.99	10.70	0.16	11.88	6.88	18.92	28.40	-20	
WB-02 (-8.3 to -12.3) GW	Upland Groundwater	8.26	0.33	5.99	6.09	0.12	10.42	6.23	16.76	20.67	-10	
WB-03 (-13.3 to -17.3) GW	Upland Groundwater	4.78	0.05	2.00	1.56	0.12	19.17	2.29	21.59	8.40	44	
WB-09 (-25.9 to -29.9) GW	Upland Groundwater	382.78	2.17	99.81	22.22	45.13	270.83	0.02	315.98	506.98	-23	
WB-09 (-9.9 to -13.9) GW	Upland Groundwater	182.69	0.49	9.98	5.43	4.51	110.42	14.19	129.12	198.59	-21	
WB-10 (-18.0 to -22.0) GW	Upland Groundwater	91.34	0.72	40.42	49.37	90.26	79.17	10.79	180.22	181.85	0	
WB-10 (-28.0 to -32.0) GW	Upland Groundwater	356.68	1.59	27.45	15.63	7.33	175.00	12.99	195.32	401.35	-35	
WB-15 (-36.8 to -40.8) GW	Upland Groundwater	19.14	0.10	2.99	1.89	0.62	11.04	1.66	13.32	24.12	-29	
WB-20 (-39.4 to -41.4) GW	Upland Groundwater	0.91	0.05	0.90	0.68	0.31	1.17	0.76	2.24	2.55	-7	
WB-22 (-42.4 to -46.4) GW	Upland Groundwater	1.00	0.07	1.65	1.15	0.45	1.17	2.00	3.62	3.87	-3	
Exxon Mobil												
EM-01-A, Trident 150 cm	TZW from Groundwater Discharge Zone	0.36	0.07	2.56	0.63	0.12	0.00	2.89	3.01	3.62	-9	
EM-01-A, Trident 30 cm	TZW from Groundwater Discharge Zone	0.31	0.05	1.01	0.45	0.13	0.04	1.30	1.47	1.82	-11	
EM-02-A, Trident 30 cm	TZW from Groundwater Discharge Zone	0.49	0.05	1.47	0.96	0.18	0.05	2.34	2.57	2.98	-7	
EM-02-C, Trident 30 cm	TZW from Groundwater Discharge Zone	0.87	0.12	2.37	1.72	0.12	0.01	3.02	3.16	5.08	-23	
EM-03-A, Trident 120 cm	TZW from Groundwater Discharge Zone	0.66	0.07	2.38	1.78	0.13	0.00	4.46	4.59	4.89	-3	
EM-03-A, Trident 120 cm; FR	TZW from Groundwater Discharge Zone	0.67	0.07	2.42	1.83	0.12	0.00	4.54	4.67	4.98	-3	
EM-03-A, Trident 30 cm	TZW from Groundwater Discharge Zone	0.64	0.07	2.03	1.29	0.13	0.10	2.87	3.11	4.04	-13	
EM-04-A, Trident 30 cm	TZW from Groundwater Discharge Zone	1.66	0.11	2.41	1.23	0.15	0.03	4.71	4.89	5.40	-5	
EM-04-C, Trident 150 cm	TZW from Groundwater Discharge Zone	1.24	0.21	8.33	4.90	0.33	0.00	12.81	13.15	14.70	-6	
EM-04-C, Trident 30 cm	TZW from Groundwater Discharge Zone	0.74	0.16	7.59	3.97	0.18	0.00	10.72	10.90	12.46	-7	
EM-05-A, Trident 30 cm	TZW from Groundwater Discharge Zone	0.71	0.16	3.75	2.15	0.17	0.00	6.69	6.87	6.76	1	
EM-06-B, Trident 30 cm	TZW from Groundwater Discharge Zone	0.49	0.08	1.96	1.32	0.13	0.01	3.02	3.16	3.84	-10	
EM-08-A, Trident 30 cm	TZW from Groundwater Discharge Zone	0.57	0.09	2.52	1.28	0.17	0.03	3.54	3.74	4.45	-9	
R2-EM-01, Trident 30 cm	TZW from Low-to-No Groundwater Discharge Zone	0.62	0.12	3.11	2.24	0.15	0.00	5.31	5.46	6.10	-6	
R2-EM-01, Trident 30 cm; FR	TZW from Low-to-No Groundwater Discharge Zone	0.61	0.12	3.04	2.17	0.15	0.00	5.29	5.45	5.95	-4	
GASCO												
GS-07-B-TR	TZW from Groundwater Discharge Zone	0.60	0.09	2.27	1.21	0.16	0.02	2.71	2.90	4.17	-18	
GS-08-D-TR	TZW from Groundwater Discharge Zone	0.62	0.09	2.52	1.69	0.18	0.00	3.59	3.77	4.92	-13	
GS-08-D-TR	TZW from Groundwater Discharge Zone	0.98	0.19	5.54	3.14	0.19	0.00	8.53	8.73	9.84	-6	
GS-02-A-TR	TZW from Low-to-No Groundwater Discharge Zone	2.04	0.03	0.57	0.48	0.08	0.33	1.08	1.49	3.13	-36	
GS-07-D-PR	TZW from Low-to-No Groundwater Discharge Zone	0.53	0.08	3.43	1.82	0.12	0.00	5.40	5.53	5.86	-3	
GS-08-A-TR	TZW from Low-to-No Groundwater Discharge Zone	1.01	0.14	8.13	4.19	0.16	0.00	10.63	10.80	13.47	-11	
Gunderson												
GN-04-A, Trident 30 cm	TZW from Groundwater Discharge Zone	0.79	0.10	3.51	1.69	0.31	0.00	4.91	5.22	6.09	-8	
GN-04-A, Trident 30 cm; FR	TZW from Groundwater Discharge Zone	0.78	0.09	3.32	1.55	0.31	0.01	4.48	4.80	5.74	-9	
GN-04-A, Trident 90 cm	TZW from Groundwater Discharge Zone	1.00	0.09	3.46	1.66	0.40	0.00	4.72	5.12	6.20	-10	
GN-05-A, Trident 150 cm	TZW from Groundwater Discharge Zone	0.66	0.11	1.58	1.28	0.46	0.25	2.18	2.89	3.62	-11	
GN-05-A, Trident 150 cm; FR	TZW from Groundwater Discharge Zone	0.67	0.11	1.60	1.32	0.48	0.25	2.23	2.96	3.70	-11	
GN-05-A, Trident 30 cm	TZW from Groundwater Discharge Zone	0.67	0.09	1.74	1.43	0.45	0.01	2.55	3.02	3.94	-13	
GN-01-E, Peeper 0 - 38 cm	TZW from Low-to-No Groundwater Discharge Zone	1.04	0.20	6.84	4.07	0.21	0.01	11.84	12.07	12.16	0	
GN-01-E, Trident 150 cm	TZW from Low-to-No Groundwater Discharge Zone	0.82	0.16	4.65	3.00	0.21	0.09	2.51	2.81	8.63	-51	
GN-02-E, Peeper 0 - 38 cm	TZW from Low-to-No Groundwater Discharge Zone	0.72	0.14	6.04	3.18	0.21	0.00	8.22	8.44	10.08	-9	
GN-02-E, Peeper 0 - 38 cm; FR	TZW from Low-to-No Groundwater Discharge Zone	0.71	0.14	5.99	3.17	0.22	0.00	7.93	8.16	10.00	-10	

Table C3.0-3. Major Ion Composition Data for Transition Zone Water, Groundwater, and Willamette River Water.

Sample	Water Type	Na (meq/l)	K (meq/l)	Ca (meq/l)	Mg (meq/l)	Cl (meq/l)	SO ₄ (meq/l)	HCO ₃ (meq/l)	Sum of Anions (meq/l)	Sum of Cations (meq/l)	Electroneutrality (%)
GN-03-A, Peepo 0 - 38 cm	TZW from Low-to-No Groundwater Discharge Zone	0.05	0.01	0.29	0.15	0.06	0.00	0.65	0.71	0.51	17
GN-04-B, Peepo 0 - 38 cm	TZW from Low-to-No Groundwater Discharge Zone	0.03	0.01	0.15	0.08	0.02	0.00	0.98	1.00	0.26	58
R2-GN-01, Peepo 0 - 38 cm	TZW from Low-to-No Groundwater Discharge Zone	0.82	0.19	8.93	5.22	0.23	0.00	11.83	12.07	15.17	-11
Boring B-47, W2B Upland Groundwater	Upland Groundwater	1.56	0.19	1.95	1.27	1.02	0.26	2.60	3.88	4.97	-12
Boring B-47, W2C Upland Groundwater	Upland Groundwater	1.62	0.17	1.88	1.14	1.17	0.35	2.96	4.48	4.82	-4
Boring B-47, W3A Upland Groundwater	Upland Groundwater	0.84	0.13	2.15	1.48	0.39	0.28	3.42	4.09	4.60	-6
Boring B-47, W3B Upland Groundwater	Upland Groundwater	0.82	0.12	1.95	1.36	0.41	0.32	3.08	3.81	4.25	-5
Boring B-47, W3C Upland Groundwater	Upland Groundwater	0.84	0.12	1.96	1.37	0.43	0.33	2.98	3.74	4.28	-7
Boring B-47, W4 Upland Groundwater	Upland Groundwater	3.78	0.06	1.95	1.43	0.46	0.21	2.13	10.85	13.44	30
Boring B-48, W7 Upland Groundwater	Upland Groundwater	10.27	0.98	14.07	4.21	20.96	0.22	1.50	22.68	29.53	-13
Boring B-48, W8 Upland Groundwater	Upland Groundwater	24.10	1.08	30.54	3.45	23.27	0.27	1.44	24.98	59.17	-41
Boring B-48, W9 Upland Groundwater	Upland Groundwater	9.22	1.08	19.36	7.52	21.13	0.22	1.40	22.75	37.18	-24
MW-36 Upland Groundwater	Upland Groundwater	0.48	0.09	1.32	0.72	0.37	0.16	1.27	1.80	2.60	-18
MW-37 Upland Groundwater	Upland Groundwater	2.22	0.18	10.23	6.28	0.81	0.19	15.45	16.45	18.91	-7
MW-37 Upland Groundwater	Upland Groundwater	1.81	0.14	7.29	5.33	0.80	0.21	1.83	2.84	14.56	-67
MW-38 Upland Groundwater	Upland Groundwater	0.51	0.10	2.04	1.12	0.47	0.30	2.20	2.97	3.77	-12
MW-42 Upland Groundwater	Upland Groundwater	0.78	0.11	1.57	0.97	0.37	0.31	1.40	2.08	3.43	-25
MW-45 Upland Groundwater	Upland Groundwater	1.10	0.40	13.92	5.62	4.80	0.46	3.56	8.81	21.05	-41
Kinder Morgan											
KM-08-A, Trident 30 cm	TZW from Groundwater Discharge Zone	1.90	0.08	2.07	2.10	0.28	0.06	4.49	4.85	6.14	-12
R2-KM-01, Trident 30 cm	TZW from Groundwater Discharge Zone	0.82	0.09	3.06	2.62	0.13	0.05	3.84	4.03	6.59	-24
R2-KM-01, Trident 30 cm; FR	TZW from Groundwater Discharge Zone	0.72	0.07	2.48	2.15	0.13	0.05	3.85	4.04	5.41	-15
KM-06-A, Peepo 0 - 38 cm	TZW from Low-to-No Groundwater Discharge Zone	0.43	0.02	0.99	0.91	0.04	0.02	1.85	1.91	2.36	-10
KM-10-A, Peepo 0 - 38 cm	TZW from Low-to-No Groundwater Discharge Zone	0.38	0.02	0.97	0.55	0.10	0.03	1.37	1.51	1.93	-12
KM-11-B, Peepo 0 - 38 cm	TZW from Low-to-No Groundwater Discharge Zone	0.15	0.03	0.94	0.44	0.05	0.00	2.64	2.69	1.56	27
KM-11-B, Peepo 0 - 38 cm; FR	TZW from Low-to-No Groundwater Discharge Zone	0.14	0.02	0.73	0.36	0.04	0.00	2.40	2.45	1.25	32
R2-KM-02, Peepo 0 - 38 cm	TZW from Low-to-No Groundwater Discharge Zone	0.57	0.04	3.28	1.54	0.86	0.00	5.13	6.01	5.44	5
Rhone Poulen											
R2-RP-01, Trident 30 cm	TZW from Groundwater Discharge Zone	1.77	0.21	8.33	5.70	6.60	0.00	7.62	14.23	16.02	-6
R2-RP-02, Trident 30 cm	TZW from Groundwater Discharge Zone	2.13	0.11	2.69	1.82	0.14	0.00	5.56	5.71	6.76	-8
R2-RP-03, Trident 30 cm	TZW from Groundwater Discharge Zone	1.26	0.05	0.32	0.24	0.32	0.11	0.93	1.36	1.87	-16
RP-02-E, Trident 150 cm	TZW from Groundwater Discharge Zone	1.13	0.18	6.14	4.52	8.66	0.44	2.27	11.37	11.96	-3
RP-02-E, Trident 30 cm	TZW from Groundwater Discharge Zone	1.52	0.20	13.07	9.79	18.00	0.06	4.16	22.22	24.59	-5
RP-03-C, Trident 150 cm	TZW from Groundwater Discharge Zone	3.06	0.32	21.76	11.85	24.40	1.18	5.84	31.43	36.99	-8
RP-03-C, Trident 30 cm	TZW from Groundwater Discharge Zone	3.12	0.34	22.26	11.85	24.54	1.53	5.63	31.70	37.57	-8
RP-03-E, Trident 30 cm	TZW from Groundwater Discharge Zone	1.87	0.33	16.57	14.81	22.00	1.08	5.39	28.47	33.59	-8
RP-03-E, Trident 90 cm	TZW from Groundwater Discharge Zone	0.80	0.13	4.67	4.12	2.91	0.21	1.30	4.42	9.72	-38
RP-07-B, Trident 30 cm	TZW from Groundwater Discharge Zone	14.18	0.21	4.65	3.41	13.43	0.16	7.35	20.94	22.45	-3
RP-07-B, Trident 30 cm; FR	TZW from Groundwater Discharge Zone	14.92	0.27	4.76	3.54	14.05	0.16	7.42	21.64	23.48	-4
RP-07-E, Peepo 0 - 38 cm	TZW from Low-to-No Groundwater Discharge Zone	4.15	0.05	3.16	2.44	3.78	0.00	5.25	9.05	9.80	-4
RP-07-E, Peepo 0 - 38 cm; FR	TZW from Low-to-No Groundwater Discharge Zone	2.78	0.06	3.97	2.43	2.91	0.01	5.73	8.66	9.23	-3
AL2-32	Upland Groundwater	65.25	0.29	7.34	4.33	50.21	1.14	19.89	71.24	77.20	-4
AL2-46	Upland Groundwater	19.27	0.06	0.42	0.23	3.84	0.46	10.08	14.38	19.97	-16
AL6-96	Upland Groundwater	17.01	0.31	7.04	4.93	14.58	2.06	8.23	24.87	29.28	-8
BST2W-61	Upland Groundwater	15.44	0.08	0.66	0.40	4.94	0.16	7.53	12.63	16.59	-14
MW-05-24	Upland Groundwater	6.39	0.02	0.29	0.07	1.29	0.30	3.32	4.92	6.78	-16
MW-05-34	Upland Groundwater	8.13	0.03	0.14	0.13	2.93	1.40	1.51	5.84	8.44	-18

Table C3.0-3. Major Ion Composition Data for Transition Zone Water, Groundwater, and Willamette River Water.

Sample	Water Type	Na (meq/l)	K (meq/l)	Ca (meq/l)	Mg (meq/l)	Cl (meq/l)	SO ₄ (meq/l)	HCO ₃ (meq/l)	Sum of Anions (meq/l)	Sum of Cations (meq/l)	Electroneutrality (%)
MW-05-52	Upland Groundwater	6.52	0.01	0.07	0.25	1.72	0.73	3.09	5.54	6.86	-11
MW-05-70	Upland Groundwater	6.92	0.05	0.08	0.06	1.18	0.63	3.71	5.52	7.11	-13
MW-10-24	Upland Groundwater	1.02	0.04	1.62	1.17	0.20	0.33	2.07	2.60	3.85	-19
RP-01-31	Upland Groundwater	3.34	0.06	0.29	0.23	0.18	0.41	2.06	2.65	3.91	-19
RP-01-51	Upland Groundwater	27.62	0.36	6.99	4.20	24.06	4.83	7.06	35.95	39.17	-4
RP-01-65	Upland Groundwater	21.23	0.48	18.11	10.70	43.16	3.00	5.56	51.72	50.51	1
RP-02-66	Upland Groundwater	332.76	1.88	77.35	35.05	437.20	1.25	3.39	441.84	447.05	-1
RP-04-16	Upland Groundwater	1.81	0.07	4.57	0.69	0.67	0.44	3.84	4.95	7.14	-18
RP-04-41	Upland Groundwater	0.43	0.05	1.49	1.35	0.21	0.36	1.79	2.35	3.32	-17
RP-06-87	Upland Groundwater	4.22	0.36	26.15	14.40	32.72	2.27	5.89	40.88	45.12	-5
RP-07-119	Upland Groundwater	0.87	0.27	12.43	5.09	14.33	0.70	2.02	17.04	18.66	-5
RP-07-84	Upland Groundwater	2.59	0.40	24.45	9.38	29.05	1.81	3.66	34.52	36.83	-3
W-09-116	Upland Groundwater	6.74	0.39	11.73	10.20	21.47	1.46	6.53	29.46	29.06	1
W-11-B	Upland Groundwater	2.91	0.29	20.51	6.90	20.17	2.77	4.41	27.35	30.62	-6
W-11-D	Upland Groundwater	20.36	0.29	10.93	6.60	25.87	4.38	5.90	36.14	38.18	-3
W-11-I	Upland Groundwater	1.09	0.16	6.19	4.28	1.20	0.01	6.95	8.16	11.72	-18
W-11-S	Upland Groundwater	3.30	0.32	2.00	0.00	0.20	0.34	3.31	3.85	5.61	-19
W-18-D	Upland Groundwater	0.57	0.07	1.22	1.00	0.12	0.41	1.42	1.95	2.85	-19
W-18-I	Upland Groundwater	0.64	0.06	0.95	0.78	0.10	0.33	1.17	1.60	2.42	-21
W-19-D	Upland Groundwater	8.09	0.43	22.36	15.22	35.26	2.21	6.04	43.50	46.10	-3
W-19-I	Upland Groundwater	27.19	0.54	23.90	14.65	57.54	1.37	5.01	63.93	66.28	-2
Siltronic											
SL-01-E, Peeper 0 - 38 cm	TZW from Groundwater Discharge Zone	0.61	0.08	5.24	2.57	0.40	0.00	6.66	7.11	8.50	-9
SL-02-C, Peeper 0 - 38 cm	TZW from Groundwater Discharge Zone	0.57	0.08	4.08	2.10	0.14	0.00	5.27	5.42	6.83	-11
SL-02-E, Peeper 0 - 38 cm	TZW from Groundwater Discharge Zone	0.64	0.10	4.34	2.67	0.79	0.00	5.57	6.37	7.75	-10
SL-03-C, Peeper 0 - 38 cm	TZW from Groundwater Discharge Zone	0.53	0.09	3.50	1.82	0.00	0.00	5.08	5.09	5.93	-8
SL-03-F, Peeper 0 - 38 cm	TZW from Groundwater Discharge Zone	0.77	0.10	4.38	3.14	0.72	0.01	6.21	6.94	8.40	-10
SL-03-F, Peeper 0 - 38 cm; FR	TZW from Groundwater Discharge Zone	0.74	0.10	4.91	3.49	0.73	0.01	6.60	7.35	9.23	-11
SL-03-F, Trident 120 cm	TZW from Groundwater Discharge Zone	0.73	0.14	3.97	2.77	0.65	0.01	6.00	6.66	7.60	-7
SL-04-A, Trident 30 cm	TZW from Groundwater Discharge Zone	0.55	0.06	1.59	0.86	0.16	0.08	1.81	2.05	3.05	-20
SL-04-A, Trident 90 cm	TZW from Groundwater Discharge Zone	1.17	0.14	5.44	3.32	0.20	0.00	8.51	8.72	10.07	-7
SL-04-F, Peeper 0 - 38 cm	TZW from Groundwater Discharge Zone	0.56	0.07	4.25	2.49	0.41	0.00	5.62	6.04	7.38	-10
SL-01-A, Trident 30 cm	TZW from Low-to-No Groundwater Discharge Zone	0.95	0.13	5.19	2.79	0.30	0.00	7.83	8.13	9.06	-5
SL-02-A, Trident 30 cm	TZW from Low-to-No Groundwater Discharge Zone	0.55	0.06	1.83	0.92	0.23	0.05	2.48	2.75	3.36	-10
SL-03-A, Trident 30 cm	TZW from Low-to-No Groundwater Discharge Zone	0.50	0.05	1.72	0.92	0.19	0.06	1.76	2.01	3.19	-23
SL-03-A, Trident 30 cm; FR	TZW from Low-to-No Groundwater Discharge Zone	0.41	0.07	1.24	0.67	0.19	0.05	1.82	2.06	2.38	-7
SL-05-A, Trident 30 cm	TZW from Low-to-No Groundwater Discharge Zone	0.75	0.10	3.84	1.88	0.21	0.01	5.19	5.41	6.56	-10
MW-03-81	Upland Groundwater	1.52	0.11	2.53	2.10	0.55	0.01	4.44	4.99	6.25	-11
MW-03-I	Upland Groundwater	4.78	0.09	6.09	4.80	9.87	0.06	4.49	14.42	15.76	-4
Willbridge											
R2-W-02, Trident 30 cm	TZW from Groundwater Discharge Zone	1.17	0.18	11.33	5.75	0.37	0.00	14.35	14.72	18.43	-11
W-04-C, Peeper 0 - 38 cm	TZW from Groundwater Discharge Zone	1.91	0.04	2.50	1.14	0.70	0.00	4.20	4.92	5.59	-6
W-04-C, Peeper 0 - 38 cm; FR	TZW from Groundwater Discharge Zone	1.75	0.04	3.56	1.67	0.65	0.00	5.75	6.42	7.02	-4
W-06-A, Trident 30 cm	TZW from Groundwater Discharge Zone	0.43	0.04	0.41	0.28	0.23	0.10	0.55	0.89	1.17	-13
W-07-C, Trident 30 cm	TZW from Groundwater Discharge Zone	0.57	0.08	0.87	1.03	0.32	0.09	0.71	1.13	2.55	-39
W-09-A, Trident 30 cm	TZW from Groundwater Discharge Zone	0.42	0.03	0.39	0.24	0.23	0.10	0.50	0.83	1.09	-13
W-09-C, Peeper 0 - 38 cm	TZW from Groundwater Discharge Zone	0.32	0.06	2.69	1.37	0.05	0.00	3.74	3.79	4.44	-8

Table C3.0-3. Major Ion Composition Data for Transition Zone Water, Groundwater, and Willamette River Water.

Sample	Water Type	Na (meq/l)	K (meq/l)	Ca (meq/l)	Mg (meq/l)	Cl (meq/l)	SO ₄ (meq/l)	HCO ₃ (meq/l)	Sum of Anions (meq/l)	Sum of Cations (meq/l)	Electroneutrality (%)
W-12-A, Trident 30 cm	TZW from Groundwater Discharge Zone	1.71	0.08	1.74	1.12	0.28	0.00	3.44	3.73	4.64	-11
W-12-A, Trident 30 cm; FR	TZW from Groundwater Discharge Zone	1.74	0.08	1.78	1.14	0.28	0.00	3.44	3.73	4.75	-12
B-20	Upland Groundwater	0.52	0.06	1.55	0.95	0.09	0.09	1.68	1.85	3.09	-25
B-7	Upland Groundwater	0.48	0.08	2.84	1.65	0.14	0.02	3.52	3.68	5.05	-16
B-9	Upland Groundwater	0.51	0.06	1.98	1.16	0.17	0.02	3.05	3.24	3.71	-7
CR-1	Upland Groundwater	0.20	0.03	0.38	0.19	0.04	0.15	0.42	0.61	0.80	-13
CR-26	Upland Groundwater	4.04	0.23	4.68	3.06	1.88	0.07	7.00	8.95	12.01	-15
CR-27C	Upland Groundwater	3.83	0.16	4.12	1.70	1.83	0.02	5.11	6.96	9.80	-17
CR-31A	Upland Groundwater	0.59	0.09	2.19	1.53	0.08	0.26	2.14	2.48	4.41	-28
CR-31B	Upland Groundwater	1.77	0.25	5.14	5.27	0.99	0.02	7.08	8.10	12.43	-21
CR-32A	Upland Groundwater	0.89	0.05	1.27	0.86	0.05	0.90	1.27	2.21	3.06	-16
CR-32B	Upland Groundwater	1.71	0.15	4.85	4.48	0.55	0.02	7.36	7.94	11.18	-17
CR-32C	Upland Groundwater	1.87	0.21	7.64	3.60	0.89	0.02	6.07	6.99	13.31	-31
Willamette River											
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.36	0.03	0.33	0.19	0.15	0.13	0.49	0.77	0.91	-8
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.14	0.02	0.21	0.12	0.06	0.04	0.33	0.43	0.50	-7
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.33	0.03	0.35	0.19	0.17	0.11	0.49	0.78	0.89	-7
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.23	0.02	0.28	0.16	0.11	0.07	0.42	0.60	0.70	-7
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.21	0.02	0.28	0.14	0.08	0.06	0.41	0.55	0.65	-8
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.20	0.02	0.29	0.15	0.10	0.07	0.39	0.56	0.66	-8
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.30	0.02	0.38	0.20	0.15	0.12	0.49	0.76	0.90	-9
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.23	0.02	0.33	0.17	0.12	0.09	0.39	0.60	0.74	-10
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.27	0.02	0.36	0.19	0.13	0.10	0.47	0.70	0.84	-9
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.24	0.02	0.31	0.17	0.10	0.08	0.46	0.64	0.74	-7
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.24	0.02	0.29	0.15	0.10	0.06	0.42	0.59	0.70	-8
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.25	0.03	0.29	0.15	0.12	0.08	0.44	0.63	0.72	-7
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.38	0.03	0.35	0.20	0.19	0.13	0.51	0.82	0.96	-7
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.22	0.02	0.27	0.16	0.11	0.05	0.39	0.55	0.66	-9
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.32	0.03	0.31	0.17	0.16	0.06	0.44	0.67	0.82	-10
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.20	0.02	0.27	0.15	0.09	0.05	0.39	0.54	0.63	-8
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.23	0.02	0.36	0.20	0.13	0.07	0.46	0.65	0.81	-11
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.18	0.02	0.30	0.17	0.09	0.07	0.38	0.54	0.66	-10
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.16	0.02	0.28	0.15	0.09	0.05	0.29	0.44	0.61	-16
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.27	0.02	0.30	0.17	0.12	0.07	0.44	0.64	0.76	-9
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.18	0.02	0.31	0.17	0.09	0.05	0.36	0.50	0.67	-15
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.13	0.02	0.21	0.12	0.06	0.04	0.28	0.37	0.48	-13
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.15	0.02	0.25	0.14	0.07	0.05	0.29	0.42	0.56	-15
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.29	0.03	0.30	0.16	0.11	0.08	0.39	0.58	0.78	-14
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.20	0.02	0.30	0.18	0.11	0.07	0.41	0.59	0.70	-8
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.17	0.02	0.27	0.14	0.09	0.06	0.33	0.48	0.60	-11
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.21	0.02	0.30	0.17	0.11	0.04	0.39	0.54	0.69	-12
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.19	0.02	0.27	0.16	0.10	0.06	0.39	0.55	0.63	-7
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.15	0.01	0.22	0.12	0.07	0.03	0.31	0.42	0.50	-9
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.18	0.02	0.23	0.13	0.07	0.04	0.34	0.45	0.55	-10
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.35	0.03	0.32	0.17	0.16	0.10	0.41	0.67	0.86	-13
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.18	0.01	0.29	0.17	0.09	0.05	0.34	0.49	0.65	-15
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.21	0.02	0.30	0.16	0.12	0.07	0.39	0.59	0.69	-8
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.13	0.02	0.22	0.12	0.08	0.05	0.23	0.37	0.49	-14

Table C3.0-3. Major Ion Composition Data for Transition Zone Water, Groundwater, and Willamette River Water.

Sample	Water Type	Na (meq/l)	K (meq/l)	Ca (meq/l)	Mg (meq/l)	Cl (meq/l)	SO ₄ (meq/l)	HCO ₃ (meq/l)	Sum of Anions (meq/l)	Sum of Cations (meq/l)	Electroneutrality (%)
Surface Water-Mor. Br	Surface Water - Morrison Bridge	0.14	0.02	0.25	0.13	0.08	0.06	0.29	0.43	0.54	-11
Surface Water-SJ Br	Surface Water - Saint Johns Br.	0.23	0.02	0.36	0.19	0.12	0.09	0.48	0.69	0.80	-7
Surface Water-SJ Br	Surface Water - Saint Johns Br.	0.18	0.02	0.31	0.16	0.08	0.07	0.37	0.53	0.67	-12
Surface Water-SJ Br	Surface Water - Saint Johns Br.	0.19	0.02	0.31	0.17	0.09	0.07	0.35	0.51	0.69	-15
Surface Water-SJ Br	Surface Water - Saint Johns Br.	0.14	0.02	0.24	0.14	0.08	0.04	0.27	0.39	0.55	-17
Surface Water-SJ Br	Surface Water - Saint Johns Br.	0.12	0.02	0.19	0.11	0.05	0.04	0.23	0.32	0.44	-16
Surface Water-SJ Br	Surface Water - Saint Johns Br.	0.10	0.02	0.14	0.08	0.05	0.04	0.17	0.27	0.34	-12

Notes:

TZW - transition zone water

Table C3.1-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Kinder Morgan Linnton.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-Sediment and TZW)			Lower depth (ft-upland GW; cm-Sediment and TZW)			BTEX		Total PAHs		Arsenic		
											Sample Date	Concentration	Units	Concentration	Units	Concentration	Units
--	Upland GW	--	Total	MW-1	--	--	--	--	--	--	02/01/02					4.5	µg/L
--	Upland GW	--	Total	MW-1	--	--	--	--	--	--	04/30/03	1 U	µg/L	36.42	µg/L		
--	Upland GW	--	Total	MW-2	--	--	--	--	--	--	11/26/02	3 U	µg/L	61.86	µg/L		
--	Upland GW	--	Total	MW-3	--	--	--	--	--	--	11/26/02	3 U	µg/L	29.07	µg/L		
--	Upland GW	--	Total	MW-4	--	--	--	--	--	--	02/01/02					9.76	µg/L
--	Upland GW	--	Total	MW-4	--	--	--	--	--	--	07/26/04	1 U	µg/L	1.74	µg/L		
--	Upland GW	--	Total	MW-5	--	--	--	--	--	--	02/01/02					1 M	µg/L
--	Upland GW	--	Total	MW-5	--	--	--	--	--	--	04/28/04	1 U	µg/L	0.2 U	µg/L		
--	Upland GW	--	Total	MW-6	--	--	--	--	--	--	02/01/02					36.9	µg/L
--	Upland GW	--	Total	MW-6	--	--	--	--	--	--	04/28/04	62.9	µg/L	0.214	µg/L		
--	Upland GW	--	Total	MW-7	--	--	--	--	--	--	01/31/02					1.31	µg/L
--	Upland GW	--	Total	MW-7	--	--	--	--	--	--	07/26/04	1 U	µg/L	0.2 U	µg/L		
--	Upland GW	--	Total	MW-8	--	--	--	--	--	--	02/01/02					7.48	µg/L
--	Upland GW	--	Total	MW-8	--	--	--	--	--	--	07/26/04	8.51	µg/L	84.02	µg/L		
--	Upland GW	--	Total	MW-9	--	--	--	--	--	--	02/01/02					20.6	µg/L
--	Upland GW	--	Total	MW-9	--	--	--	--	--	--	07/26/04	889.87	µg/L	0.114	µg/L		
--	Upland GW	--	Total	MW-10	--	--	--	--	--	--	02/01/02					4.53	µg/L
--	Upland GW	--	Total	MW-10-Dup	--	--	--	--	--	--	02/01/02					5.17	µg/L
--	Upland GW	--	Total	MW-10	--	--	--	--	--	--	10/29/03	28.48	µg/L	99.53	µg/L		
--	Upland GW	--	Total	MW-12	--	--	--	--	--	--	01/31/02					58.3	µg/L
--	Upland GW	--	Total	MW-12	--	--	--	--	--	--	07/26/04	14.36	µg/L	15.44	µg/L		
--	Upland GW	--	Total	MW-13	--	--	--	--	--	--	01/31/02					47.1	µg/L
--	Upland GW	--	Total	MW-13-Dup	--	--	--	--	--	--	01/31/02					48	µg/L
--	Upland GW	--	Total	MW-13	--	--	--	--	--	--	07/26/04	8.998	µg/L	3.941	µg/L		
--	Upland GW	--	Total	MW-14	--	--	--	--	--	--	01/31/02					1.48	µg/L
--	Upland GW	--	Total	MW-14	--	--	--	--	--	--	07/26/04	1 U	µg/L	0.2 U	µg/L		
--	Upland GW	--	Total	MW-15	--	--	--	--	--	--	01/31/02					2.36	µg/L
--	Upland GW	--	Total	MW-15	--	--	--	--	--	--	07/26/04	1 U	µg/L	1 U	µg/L		
--	Upland GW	--	Total	MW-16	--	--	--	--	--	--	02/01/02					89.6	µg/L
--	Upland GW	--	Total	MW-16	--	--	--	--	--	--	07/26/04	142.99	µg/L	2.78	µg/L		
--	Upland GW	--	Total	MW-17	--	--	--	--	--	--	01/31/02					3.59	µg/L
--	Upland GW	--	Total	MW-17	--	--	--	--	--	--	07/26/04	1 U	µg/L	1 U	µg/L		
--	Upland GW	--	Total	MW-18	--	--	--	--	--	--	07/26/04	1 U	µg/L	0.2 U	µg/L		
--	Upland GW	--	Total	MW-20	--	--	--	--	--	--	07/30/03	69.51	µg/L	36.859	µg/L		
--	Upland GW	--	Total	MW-21	--	--	--	--	--	--	07/30/03	24.48	µg/L	7.524	µg/L		
--	Upland GW	--	Total	MW-22	--	--	--	--	--	--	07/26/04	13.357	µg/L	13.43	µg/L		
--	Upland GW	--	Total	MW-23	--	--	--	--	--	--	07/26/04	16.704	µg/L	4.3	µg/L		
--	Upland GW	--	Total	MW-24	--	--	--	--	--	--	07/26/04	14.566	µg/L	2.9	µg/L		
--	Upland GW	--	Total	RW-1	--	--	--	--	--	--	11/26/02	39.28	µg/L	353.27	µg/L		
--	Upland GW	--	Total	RW-2	--	--	--	--	--	--	11/26/02	68	µg/L	102.11	µg/L		
--	Upland GW	--	Total	RW-3	--	--	--	--	--	--	11/26/02	11.31	µg/L	288.15	µg/L		
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G116	0		27			08/03/04	0.33 UT	µg/kg	2926	µg/kg	3.03 J	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G117	0		28			08/03/04			3227	µg/kg	3.67 J	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G120	0		29			08/05/04			1380	µg/kg	3.37 JT	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G121	0		30			08/03/04	0.35 UT	µg/kg	1631	µg/kg	3.84 J	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G122	0		29			08/03/04	0.34 UT	µg/kg	3150	µg/kg	3.52 J	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G123	0		26			09/08/04	0.25 UT	µg/kg	24.36 J	µg/kg	2.27 J	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G124	0		30			10/07/04	0.21 UT	µg/kg	3628 J	µg/kg	8.79 JT	mg/kg	
Groundwater Discharge Zone	Sediment	--	--	LW2-G126	0		30			10/07/04	0.21 UT	µg/kg	258.5 J	µg/kg	2.7 J	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G127	0		26			08/09/04	0.31 UJT	µg/kg	10740	µg/kg	3.33 JT	mg/kg	
Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-KM8A	0		20			12/01/05	0.19 UT	µg/kg	125.54 J	µg/kg	3.82	mg/kg	

Table C3.1-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Kinder Morgan Linnton.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-Sediment and TZW)			Lower depth (ft-upland GW; cm-Sediment and TZW)			BTEX		Total PAHs		Arsenic		
							Sample Date	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-R2KM2	0	30	12/01/05	0.38 UT	µg/kg	1345.4	µg/kg	3.64 T	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	PSYDD3S1S1	0	12	12/15/94	5200 T	µg/kg	6469	µg/kg	18	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	PSYDD3S2S2	0	12	12/15/94	3300 T	µg/kg	7626	µg/kg	63	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	PSYDD3S3S3	0	12	12/15/94	34 T	µg/kg	4350	µg/kg	20	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	PSYDD3S4S4	0	12	12/15/94	149 T	µg/kg	4420	µg/kg	98	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCDRD05PG01212	0	30	05/26/05			627.9	µg/kg	3.59	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCDRD05PG01414	0	30	05/26/05	0.38 UT	µg/kg	616.9	µg/kg	4.01	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGV99S1S1_10	0	10	10/08/99	200 UT	µg/kg	330 U	µg/kg	4.32	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGV99S2S2_10	0	10	10/08/99	200 UT	µg/kg	10920	µg/kg	3.2	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGV99S3S3_10	0	10	10/08/99	408 UT	µg/kg	3710	µg/kg	3.86	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGV99S4S4_10	0	10	10/08/99	200 UT	µg/kg	660 U	µg/kg	2.6	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0170	0	10	09/17/97			1401 J	µg/kg	5 U	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0170000A	0	90	10/15/97			69300	µg/kg	5 U	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0180	0	10	09/17/97			2683	µg/kg	6 U	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0200	0	10	09/23/97			808	µg/kg	5 U	mg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0240	0	10	09/17/97			1321 J	µg/kg	5 U	mg/kg				
Low-To-No Groundwater Discharge Zone	TZW	Peep	--	LWG2-P-KM10A	0	38	11/30/05	0.22 UT	µg/L	0.105 JT	µg/L	2.38	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Peep	--	LWG2-P-KM11B	0	38	11/29/05	0.22 UT	µg/L	2.9 JT	µg/L	4.04 J	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Peep	--	LWG2-P-KM6A	0	38	11/30/05	0.22 UT	µg/L	0.235 JT	µg/L	0.74	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Peep	--	LWG2-P-R2KM2	0	38	11/30/05	0.22 UT	µg/L	0.156 JT	µg/L	11.6 T	µg/L				
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-KM8A	30	30	10/19/05	0.22 UT	µg/L	1.28 T	µg/L	8.56	µg/L				
Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-KM8A-Filt	30	30	10/19/05			0.51 JT	µg/L	8.31	µg/L				
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-R2KM1	30	30	10/19/05			0.22 UT	µg/L	18.6 JT	µg/L	6.12	µg/L		
Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-R2KM1-Filt	30	30	10/19/05					11.2 T	µg/L	6.8 T	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-R2KM2	30	30	10/18/05	0.23 JT	µg/L								
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-R2KM2	150	150	10/18/05	0.26 JT	µg/L								12.8 µg/L

Notes:

-- Indicates no data are available

BTEX - benzene, toluene, ethylbenzene, and xylenes

COI - contaminant of interest

GW - groundwater

PAH - polycyclic aromatic hydrocarbon

TZW - transition zone water

Reason codes for qualifiers:

J - The associated numerical value is an estimated quantity.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

M - Analyte included in the analysis but not detected above laboratory method reporting limits (MRLs)

Reason codes for descriptors:

T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table C3.2-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – ARCO.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; cm-Sediment and TZW)	Sample Date	BTEX		Total PAHs		Arsenic		Lead			
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-1	23.0	--	06/10/03	2 U	µg/L	1.075	µg/L	20	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-2	16.0	--	06/10/03	2 U	µg/L	12.268	µg/L	6.33	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-3	23.0	--	06/10/03	2 U	µg/L	0.12	µg/L	1.88	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-4	21.0	--	06/11/03	2 U	µg/L	2.425	µg/L	15.1	µg/L	1.1	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-5	34.0	--	06/11/03					41.7	µg/L	2.56	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-5	64.0	--	06/11/03	1.64	µg/L	82.648	µg/L						
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-6	34.0	--	06/12/03			9.527	µg/L						
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-6	44.0	--	06/12/03	12.8	µg/L			57.4	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-11	25.0	--	08/27/03	2 U	µg/L	0.672	µg/L	0.54 J	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	REV-1	9.0	--	09/10/03	2 U	µg/L	0.756	µg/L						
--	Upland GW	--	Organics=Total, Metals=Dissolved	REV-1	34.0	--	09/10/03					3.41	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	REV-2	6.0	--	09/09/03	2 U	µg/L	17.104	µg/L				13.8	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	REV-2	21.0	--	09/09/03					6.48	µg/L				
--	Upland GW	--	Organics=Total, Metals=Dissolved	REV-3	7.0	--	09/10/03	2 U	µg/L	2.363	µg/L	1.59	µg/L	0.492	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	REV-4	7.0	--	09/11/03	43.78	µg/L	27.29	µg/L	30.8	µg/L	682	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	REV-5	4.5	--	09/11/03	43.54	µg/L	6.305	µg/L						
--	Upland GW	--	Organics=Total, Metals=Dissolved	REV-5	24.0	--	09/11/03					20.1	µg/L	0.487	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-5	10.5	--	10/12/99					1 U	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-5	10.5	--	02/21/01	2 U	µg/L	0.2 U	µg/L						
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-6	10.5	--	10/12/99					1 U	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-6	10.5	--	02/21/01	2 U	µg/L	0.103	µg/L						
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-7	30.0	--	07/01/02	133.23	µg/L	18.734	µg/L	26.6	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-9	28.5	--	07/01/02	2 U	µg/L	6.095	µg/L	1.49	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	IW-1	20.0	--	01/20/99			8.602	µg/L	13.61	µg/L	1.2	µg/L	6.6	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	IW-2	30.0	--	07/01/02	29.72	µg/L	6.462	µg/L	13.5	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	IW-3	20.0	--	07/01/02	114.02	µg/L	6.305	µg/L	2.34	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	IW-6	20.0	--	10/13/99					2.3	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	IW-6	20.0	--	02/21/01	2 U	µg/L	8.715	µg/L						
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-31	10.0	--	02/01/01	4.56	µg/L	49.86	µg/L	--					
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-1	8.0	--	10/13/99					1 U	µg/L	2.4	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-1	8.0	--	02/21/01	2 U	µg/L	0.2 U	µg/L						
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-2	10.5	--	10/13/99					4.8	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-2	10.5	--	02/21/01	2 U	µg/L	0.2 U	µg/L	--					
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-3	10.5	--	02/21/01			0.152	µg/L	1.87	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-4	10.0	--	02/21/01	8.56	µg/L								
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-4	10.0	--	06/19/03			2.723	µg/L						
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-4	10.0	--	07/23/03					1.82	µg/L	8.26	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-5	12.0	--	02/21/01			2.218	µg/L	4.14	µg/L	1.01	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-6	12.5	--	07/20/99			3.87	µg/L	1.45	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-7	18.0	--	02/21/01	2 U	µg/L	3.164	µg/L						
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-7	18.0	--	06/12/03					10.8	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-7	18.0	--	06/19/03	78.25	µg/L	7.09	µg/L	1.7	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-13	17.5	--	10/12/99	2 U	µg/L	0.2 U	µg/L						
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-16	10.5	--	02/21/01	1 U	µg/L	20.39	µg/L	7	µg/L	1.35	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-17	11.0	--	01/28/99					1 U	µg/L				
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-7	40.0	--	06/19/03	373.2	µg/L	180.17	µg/L	3.9	µg/L	5.17	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-8	30.0	--	06/19/03	6.46	µg/L	5.83	µg/L	9.9	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-9	30.0	--	06/19/03	2 U	µg/L	0.2 U	µg/L	25.8	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	NGP-3	26.0	--	02/18/04	2 U	µg/L	4.08	µg/L	11.5	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	NGP-3a	26.0	--	02/18/04	2 U	µg/L	35.118	µg/L	11	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	NGP-4	30	--	02/18/04	2 U	µg/L			13.9	µg/L	1 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	NGP-6	30.0	--	02/26/04	1.07	µg/L	8.143	µg						

Table C3.2-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – ARCO.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; cm-Sediment and TZW)	Sample Date	BTEX		Total PAHs		Arsenic		Lead	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G153	0	28	08/18/04			7412	µg/kg	3.18 J	mg/kg	50.1	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G155	0	26	09/08/04			10053	µg/kg	2.9 J	mg/kg	72.2	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G156	0	26	08/18/04	0.155 UT	µg/kg	3606	µg/kg	3.49 J	mg/kg	13.9	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G157	0	25	09/08/04	0.105 UT	µg/kg	3292	µg/kg	3.71 J	mg/kg	13.3	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G158	0	27	08/18/04	0.165 UT	µg/kg	4600	µg/kg	3.56 J	mg/kg	14.1	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G160	0	26	09/08/04	0.105 UT	µg/kg	7473	µg/kg	6.44 J	mg/kg	35.8	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G161	0	28	09/08/04	0.61 JT	µg/kg	7506	µg/kg	4.48 J	mg/kg	20	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G162	0	29	08/18/04	0.17 UT	µg/kg	3358	µg/kg	3.63 J	mg/kg	13.9	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G163	0	25	09/08/04	0.095 UT	µg/kg	404.2	µg/kg	1.54 J	mg/kg	3.23	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-GBT012	0	10	12/16/05	0.14 UT	µg/kg	13138	µg/kg	3.46	mg/kg	26.1	mg/kg
Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-AR2A	0	23	11/29/05	0.14 UT	µg/kg	1535	µg/kg	2.05 T	mg/kg	15.3 T	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-R2AR1	0	24	11/29/05	0.095 UT	µg/kg	1034.1 J	µg/kg	5.12	mg/kg	61.9 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-R2AR1-2	0	24	11/29/05	0.1 UT	µg/kg	1162.3 J	µg/kg	3.07	mg/kg	16.4 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-R2AR2	0	19	11/29/05	0.1 UT	µg/kg	2659	µg/kg	4.29	mg/kg	330	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-R2AR4	0	18	11/29/05	0.1 UT	µg/kg	1957.4	µg/kg	4.45	mg/kg	16.2	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWPTZSARCO2B2	0	30	01/21/05	0.485 UT	µg/kg	46280	µg/kg	4.32	mg/kg	22.4	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWPTZSARCO3B	0	30	01/21/05	0.48 UT	µg/kg	227320	µg/kg	4.255 T	mg/kg	27.45 T	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWPTZSARCO6B-1	0	30	01/21/05	0.46 UT	µg/kg	131340	µg/kg	3.5	mg/kg	24.1	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWPTZSARCO6B-2	0	30	01/21/05	0.485 UT	µg/kg	46840	µg/kg	3.53	mg/kg	31.9	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCAF97S028W4139	0	10	06/10/97			1483	µg/kg				
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SGP0701	0	30.48	06/20/06			12371	µg/kg	6.74	mg/kg	88.3	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SGP2001	0	30.48	06/16/06			5529	µg/kg	15.9	mg/kg	47.5	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS17	0	15.24	05/18/06	285.5 UT	µg/kg	2139.7	µg/kg	4.4 J	mg/kg	12.1 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS18	0	15.24	05/18/06								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS19	0	17.78	05/18/06	270.5 UT	µg/kg	1734.9	µg/kg	5.72	mg/kg	14.7	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS20	0	17.78	05/18/06								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS21a	0	10.16	05/19/06	279 UT	µg/kg	1809.2	µg/kg	5.38 J	mg/kg	14.4 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS23	0	7.62	05/17/06	323 UT	µg/kg	1902.1	µg/kg	5.7 J	mg/kg	15.3 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS24	0	10.16	05/19/06								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS29	0	2.54	05/15/06	124 UJT	µg/kg	332.3	µg/kg	9.83 J	mg/kg	32	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS30	0	2.54	05/15/06								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS31	0	15.24	05/16/06	112.5 UT	µg/kg	9.75	µg/kg	7.23 J	mg/kg	22.5	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS32	0	17.78	05/16/06								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS33	0	17.78	05/16/06	223.5 UT	µg/kg						
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS34	0	10.16	05/16/06								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS35	0	15.24	05/17/06	291.5 UT	µg/kg	1627.1	µg/kg	6.31	mg/kg	16.2	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS36	0	12.7	05/17/06								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS37	0	15.24	05/17/06	290 UT	µg/kg	2019.9	µg/kg	6.42 J	mg/kg	17.5 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS38	0	15.24	05/17/06								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS39	0	15.24	05/18/06	244 UT	µg/kg	52954	µg/kg	4.85	mg/kg	20.5	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS40	0	17.78	05/18/06	285.5 UT	µg/kg	27799.8	µg/kg	6.89	mg/kg	22.9	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS41	0	17.78	05/18/06	268 UT	µg/kg	40349	µg/kg	5.98 T	mg/kg	23.3 T	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS42	0	15.24	05/18/06	249 UT	µg/kg	9734.2	µg/kg	5.3	mg/kg	16.3	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS43	0	17.78	05/19/06								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS44	0	17.78	05/19/06	275.5 UT	µg/kg	5264.4 J	µg/kg	4.98 T	mg/kg	11.2 T	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS46	0	17.78	05/17/06	294 UT	µg/kg	3942.2	µg/kg	5.73 J	mg/kg	20 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS47	0	17.78	05/17/06								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS48	0	15.24	05/17/06	321.5 UT	µg/kg	2007.3	µg/kg	6.17 J	mg/kg	16.7 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS49	0	15.24	05/17/06	272.5 UT	µg/kg	1370.2	µg/kg	5.56 J	mg/kg	14.9 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCBPE06SS50	0	15.24	05/16/06								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCDRD05PG											

Table C3.2-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – ARCO.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; cm-Sediment and TZW)	Sample Date	BTEX		Total PAHs		Arsenic		Lead	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-R2AR1	30	30	10/17/05	0.11 UT	µg/L	0.165 JT	µg/L	32 T	µg/L	9.52 JT	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-R2AR1-FILT	30	30	10/17/05			0.0536 JT	µg/L	32.3	µg/L	0.01 U	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-R2AR2	30	30	10/17/05	0.155 UT	µg/L	0.208 JT	µg/L	15.1	µg/L	58.3 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-R2AR2-FILT	30	30	10/17/05			0.115 JT	µg/L	15.6	µg/L	0.015 U	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-R2AR3	30	30	10/18/05	0.21 UT	µg/L	2.31 JT	µg/L	3.06	µg/L	99.8 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-R2AR3-FILT	30	30	10/18/05			1.97 JT	µg/L	0.76	µg/L	2.51 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-R2AR4	30	30	10/18/05	0.11 UT	µg/L	0.52 T	µg/L	15.9	µg/L	5.19 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-R2AR4-FILT	30	30	10/18/05			0.324 JT	µg/L	15.1	µg/L	0.1 J	µg/L
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-AR1A	150	150	10/13/05	0.15 JT	µg/L	7.05 JT	µg/L	13 T	µg/L	11.6 JT	µg/L
Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T90-AR1A-FILT	150	150	10/13/05			1.08 JT	µg/L	12.1	µg/L	0.018 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-R2AR2	90	90	10/17/05	0.16 UT	µg/L	0.67 T	µg/L	21.2	µg/L	11.8 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T90-R2AR2-FILT	90	90	10/17/05			0.3 T	µg/L	22.5	µg/L	0.12 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Filtered	LWP1-T-ARCO2Bfilt	30	30	11/23/04			0.0069 JT	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWP1-T-ARCO2Bunfilt	30	30	11/23/04	0.7 UT	µg/L	0.958 T	µg/L	2	µg/L	0.625 U	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Filtered	LWP1-T-ARCO3Bfilt	30	30	11/23/04			0.52 T	µg/L	8	µg/L	0.04 U	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWP1-T-ARCO3Bunfilt	30	30	11/23/04	1.15 UT	µg/L	2.42 T	µg/L	8.9	µg/L	26.4	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Filtered	LWP1-T-ARCO6Bfilt	30	30	11/23/04			0.306 JT	µg/L	10.9	µg/L	0.015 U	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWP1-T-ARCO6Bunfilt	30	30	11/23/04	1.9 UT	µg/L	1.22 T	µg/L	10.8	µg/L	5.47	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Peep	--	LWP-TZW3AR02B2	0	38	01/10/05	1.01 JT	µg/L	3.4 JT	µg/L	0.1 U	µg/L	3.74	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Peep	--	LWP-TZW3AR03B	0	38	01/10/05	1.79 JT	µg/L	24.3 JT	µg/L	0.3 J	µg/L	18.3	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Peep	--	LWP-TZW3AR06B-1	0	38	01/10/05	0.11 UT	µg/L	13.1 JT	µg/L	0.3 J	µg/L	3.4	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	Unfiltered	LWP-TZW71-AR02B	91.44	152.4	02/07/05	1.65 JT	µg/L	2.07 JT	µg/L	21.05 T	µg/L	12.65 T	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	Filtered	LWP-TZW71-AR02B-Filt	91.44	152.4	02/07/05			0.825 JT	µg/L	23.3	µg/L	0.017 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	Unfiltered	LWP-TZW71-AR03B	91.44	152.4	02/08/05	0.6 JT	µg/L	14.2 T	µg/L	3.3	µg/L	22.2	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	Filtered	LWP-TZW71-AR03B-Filt	91.44	152.4	02/08/05			0.42 JT	µg/L	0.5	µg/L	0.145	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	Unfiltered	LWP-TZW71-AR06B-1	91.44	152.4	02/08/05	0.63 JT	µg/L	4.95 JT	µg/L	16.2	µg/L	166	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	Filtered	LWP-TZW71-AR06B-1-Filt	91.44	152.4	02/08/05			3.24 T	µg/L	6.8	µg/L	0.027	µg/L

Notes:

-- Indicates no data are available

BTEX - benzene, toluene, ethylbenzene, and xylenes

COI - contaminant of interest

GW - groundwater

PAH - polycyclic aromatic hydrocarbon

TZW - transition zone water

Reason codes for qualifiers:

J - The associated numerical value is an estimated quantity.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:

T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table C3.3-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – ExxonMobil.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; cm-Sediment and TZW)	Sample Date	Total BTEX		Arsenic		Lead		Zinc		
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW01	--	--	09/30/03	0.8 U	µg/L	4.8 J	µg/L	1.2 U	µg/L	14.1 J	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW01	--	--	10/03/03			5 U	µg/L	1.2 U	µg/L	7	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW02	--	--	09/30/03	0.8 U	µg/L	3 J	µg/L	1.3	µg/L	5 U	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW03	--	--	09/30/03	0.8 U	µg/L	1 U	µg/L					
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW04	--	--	04/06/90			27	µg/L	2.4 J	µg/L	1.4	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW05	--	--	09/29/03			0.8 U	µg/L	2.1 J	µg/L	2.3	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW06	--	--	09/30/03			0.5	µg/L	2.8 J	µg/L	4	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW07	--	--	10/01/03			167	µg/L			5.6	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW08	--	--	04/06/90			0.8 U	µg/L	10.8	µg/L	1.2 U	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW09	--	--	10/01/03			5 U	µg/L	1.2 U	µg/L	19.1	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW10	--	--	10/01/03			19	µg/L	6.8	µg/L	4.4	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW10	--	--	10/03/03	0.8 U	µg/L					7.6	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW11	--	--	10/01/03			27	µg/L					
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW12	--	--	04/06/90			2188	µg/L	6.4	µg/L	1.2 U	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW13	--	--	10/02/03			126	µg/L	22.6	µg/L	1.2 U	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW14	--	--	10/02/03			5 U	µg/L	1.4	µg/L	5 U	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW15	--	--	10/01/03			28	µg/L			13.4	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW15	--	--	10/03/03			5 U	µg/L	1.4	µg/L	4.6 J	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW16	--	--	10/01/03			81	µg/L					
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW16	--	--	10/03/03			31	µg/L	6.8	µg/L	2.4	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW17	--	--	10/03/03					4.1 J	µg/L	4.3 J	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW17	--	--	10/03/03	8.7	µg/L	52	µg/L	23.3	µg/L	3.5	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW18	--	--	10/03/03			0.8 U	µg/L	11.4	µg/L	1.2 U	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW19	--	--	10/03/03			0.8 U	µg/L	4.6 J	µg/L	1.2 U	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW20	--	--	10/02/03			0.8 U	µg/L	5 U	µg/L	7.3	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW21	--	--	10/02/03			0.8 U	µg/L	1.2 U	µg/L	10.9	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW23	--	--	10/01/03			8.2	µg/L	1.2 U	µg/L	3.2 U	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW24	--	--	10/08/01			11/15/00			1.9 U	µg/L	23 J	µg/L
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW25	--	--				3 J	µg/L	1.9 U	µg/L	15.8 J	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	KMW26	--	--	11/15/00			52	µg/L	36.4	µg/L	1.8	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	W-1	--	--	10/02/03			30	µg/L	19.8	µg/L	1.2 U	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	W-4	--	--	10/02/03			69	µg/L	19.4	µg/L	12.5	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	W-7	--	--	10/02/03			155	µg/L	21.3	µg/L	4.8	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	W-10	--	--	10/02/03	1	µg/L	1	µg/L	7.7	µg/L	1.5	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	W-13	--	--	10/01/03			61	µg/L	2.1 J	µg/L	7.7	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	W-15	--	--	10/03/03			0.8 U	µg/L	12.3	µg/L	1.3	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	W-16	--	--	10/03/03			0.8 U	µg/L	16.6	µg/L	5 U	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	W-17	--	--	09/30/03			19	µg/L	1.2 U	µg/L	7.3 U	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	W-18	--	--	11/12/00					3 U	µg/L	25	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	W-19	--	--	09/30/03			0.8 U	µg/L	5 U	µg/L	1.6	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	W-20	--	--	11/16/00			1.2 U	µg/L	1.2 U	µg/L	20.4	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	W-21	--	--	09/30/03			0.8 U	µg/L	2.5 J	µg/L	89.4	µg/L	
--	Upland GW	--	BTEX=Total, Metals=Dissolved	W-22	--	--	09/30/03			0.8 U	µg/L	5 U	µg/L	21.1	µg/L	
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	LW2-G166	0	20	09/08/04	0.23 UT	µg/kg	12.5 J	mg/kg	15.8	mg/kg	81.7	mg/kg	
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	LW2-G170	0	29	08/11/04	1.4 T	µg/kg	2.92 J	mg/kg	11.1	mg/kg	75.4	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G172	0	29	08/11/04	0.35 JT	µg/kg	4.17 J	mg/kg	14.1	mg/kg	117	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G173	0	28	08/11/04	0.21 JT	µg/kg	3.87 J	mg/kg	14.8	mg/kg	116	mg/kg	
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	LW2-G174	0	26	08/11/04	0.28 UT	µg/kg	3.91 J	mg/kg	13.8	mg/kg	91	mg/kg	
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	LW2-G176	0	21	08/11/04	0.21 UT	µg/kg	5.2 J	mg/kg	12.9	mg/kg	80.9	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G177	0	30	08/11/04	0.37 UT	µg/kg	3.8 J	mg/kg	14.4	mg/kg	105	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G179	0	24	08/10/04	0.68 JT	µg/kg	2.57 J	mg/kg	14.2 J	mg/kg	80.1	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G182	0	24	08/10/04			2.61 J	mg/kg	8.29 J	mg/kg	72.1	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G184	0	21	08/10/04	0.23 UJT	µg/kg	2.6 J	mg/kg	8.25 J	mg/kg	86.8	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G185	0	28	08/18/04	0.23 UT	µg/kg	2.97 J	mg/kg	11.6</td				

Table C3.3-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – ExxonMobil.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm- sediment and TZW)		Lower depth (ft-upland GW; cm-sediment and TZW)		Total BTEX		Arsenic		Lead		Zinc	
					Sample Date	Concentration	Units	Sample Date	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCAF97S045W4161	0	10	06/11/97									
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCAF97S045W4162	0	10	06/11/97									
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCAF97S046W4163	0	10	06/11/97									
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCAF97S047W4164	0	10	06/11/97									
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	WLCPB06SS45	0	17.78	05/19/06	536 UT	μg/kg	5.1	mg/kg	11.5	mg/kg	105	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCDRD05PG03434	0	30	05/26/05			3.94	mg/kg	15.5	mg/kg	90 J	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCDRD05PG03636	0	30	05/26/05			3.47	mg/kg	14.1	mg/kg	81.3 J	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCDRD05PG139139Dup	0	30	05/26/05			3.33	mg/kg	13.9	mg/kg	82.4 J	mg/kg	
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	WR-WSI98SD0430	0	10	09/19/97			5 U	mg/kg	15	mg/kg	95.5	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0440	0	10	09/19/97			5 U	mg/kg	16	mg/kg	101	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0450	0	10	09/19/97			5 U	mg/kg	14	mg/kg	87 J	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0460	0	10	09/19/97			5 U	mg/kg	13	mg/kg	87.6 J	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0470	0	10	09/19/97			4 U	mg/kg	12	mg/kg	82 J	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD048000CC	0	10	09/19/97			5 T	mg/kg	10 T	mg/kg	89.9 T	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD048000ACC	0	90	10/15/97			4 UT	mg/kg	26 T	mg/kg	153 T	mg/kg	
Interpreted Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-EM1A	30	30	10/06/05	0.38 UT	μg/L	2.1	μg/L	6.04	μg/L	32.7 J	μg/L	
Interpreted Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-EM1A-Filt	30	30	10/06/05			2.73	μg/L	0.04 U	μg/L	8.69	μg/L	
Interpreted Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-EM2A	30	30	10/06/05	0.25 UT	μg/L	6.32	μg/L	0.16 U	μg/L	5.02 UJ	μg/L	
Interpreted Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-EM2A-Filt	30	30	10/06/05			6.35	μg/L	0.03 U	μg/L	4.52	μg/L	
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Trident	Unfiltered	LWG2-T30-EM2C	30	30	10/06/05	0.24 UT	μg/L	22.7	μg/L	55.1	μg/L	144 J	μg/L	
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Trident	Filtered	LWG2-T30-EM2C-Filt	30	30	10/05/05			16	μg/L	0.09 U	μg/L	13.4	μg/L	
Interpreted Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-EM3A	30	30	10/05/05	0.22 UT	μg/L	28.5	μg/L	3.74	μg/L	19.3 J	μg/L	
Interpreted Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-EM3A-Filt	30	30	10/05/05			26.4	μg/L	0.16	μg/L	5.7	μg/L	
Interpreted Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-EM4A	30	30	10/05/05	0.27 UT	μg/L	9.98	μg/L	2.25	μg/L	5.86 U	μg/L	
Interpreted Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-EM4A-Filt	30	30	10/05/05			9.63	μg/L	0.2	μg/L	2.23	μg/L	
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Trident	Unfiltered	LWG2-T30-EM4C	30	30	10/05/05	0.27 UT	μg/L	24.6	μg/L	4.58	μg/L	22.2 J	μg/L	
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Trident	Filtered	LWG2-T30-EM4C-Filt	30	30	10/05/05			23.8	μg/L	0.02 U	μg/L	3.76	μg/L	
Interpreted Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-EM5A	30	30	10/04/05	0.58 JT	μg/L	6.57	μg/L	5.26	μg/L	15.1 UJ	μg/L	
Interpreted Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-EM5A-Filt	30	30	10/04/05			6.52	μg/L	0.06 U	μg/L	4.25	μg/L	
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Trident	Unfiltered	LWG2-T30-EM6B	30	30	10/04/05	0.83 JT	μg/L	26.7	μg/L	27.5	μg/L	113 J	μg/L	
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Trident	Filtered	LWG2-T30-EM6B-Filt	30	30	10/04/05			30.9	μg/L	1.61	μg/L	4.53	μg/L	
Interpreted Groundwater Discharge Zone-2	TZW	Trident	Unfiltered	LWG2-T30-EM8A	30	30	10/04/05	0.46 JT	μg/L	23.2 T	μg/L	0.24 UT	μg/L	2.39 UJT	μg/L	
Interpreted Groundwater Discharge Zone-2	TZW	Trident	Filtered	LWG2-T30-EM8A-Filt	30	30	10/04/05			23.9	μg/L	0.02 U	μg/L	1.86	μg/L	
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-R2EM1	30	30	10/03/05	0.31 JT	μg/L	11	μg/L	2.72	μg/L	13.9 UJ	μg/L	
Low-To-No Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-R2EM1-Filt	30	30	10/03/05			11.3	μg/L	0.03 U	μg/L	2	μg/L	
Interpreted Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-EM1A	150	150	10/06/05	0.14 JT	μg/L	12.1	μg/L	0.44 U	μg/L	5.24 UJ	μg/L	
Interpreted Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T90-EM1A-Filt	150	150	10/06/05			12.4	μg/L	0.02 U	μg/L	1.98	μg/L	
Interpreted Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-EM3A	120	120	10/05/05	0.26 UT	μg/L	74.9	μg/L	0.77 U	μg/L	6.51 UJ	μg/L	
Interpreted Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T90-EM3A-Filt	120	120	10/05/05			77.3 T	μg/L	0.62 T	μg/L	3.98 T	μg/L	
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Trident	Unfiltered	LWG2-T90-EM4C	150	150	10/05/05	1.31 JT	μg/L	30	μg/L	0.63 U	μg/L	7.44 UJ	μg/L	
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Trident	Filtered	LWG2-T90-EM4C-Filt	150	150	10/05/05			30.4	μg/L	0.02 U	μg/L	4.61	μg/L	

Notes:

-- Indicates no data are available

BTEX - benzene, toluene, ethylbenzene, and xylenes

COI - contaminant of interest

GW - groundwater

TZW - transition zone water

Reason codes for qualifiers:

J - The associated numerical value is an estimated quantity.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:

T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Benzene		Toluene		BTEX		Total Cyanide	
								TZW)	TZW)	Concentration	Units	Concentration	Units	Concentration	Units
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW1	22	--	03/29/96								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW1	22	--	08/24/00	4.66	µg/L	5.87	µg/L	63.42	µg/L	4.31	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW2	61	--	08/12/00	0.5 U	µg/L	0.5 U	µg/L	1 U	µg/L	0.82	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW3	26	--	08/22/00							0.18	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW3	56	--	03/18/99								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW3	56	--	08/22/00	10.6	µg/L	1 U	µg/L	10.6	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW4	57	--	03/19/99								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW4	57	--	08/15/00								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW4	57	--	08/23/00	15000	µg/L	100 U	µg/L	15870	µg/L	1.76	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW5	100	--	08/23/00	11500	µg/L	100 U	µg/L	12436	µg/L	0.816	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW5	175	--	09/23/98								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW6	32	--	05/31/94	1200	µg/L	32	µg/L	1722	µg/L	0.41	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW6	61	--	08/27/93							2.69	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW8	29	--	08/24/00								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW8	56	--	03/19/99								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW8	56	--	08/24/00	20300	µg/L	248	µg/L	22174	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW9	29	--	03/17/99								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW9	29	--	08/11/00	0.5 U	µg/L	0.5 U	µg/L	1 U	µg/L	0.01	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW10	25	--	02/24/93								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW10	25	--	05/31/94	93800	µg/L	30900	µg/L	129270	µg/L	0.21	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW10	61	--	08/12/00								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW11	32	--	05/31/94	16800	µg/L	4000	µg/L	23410	µg/L	0.21	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW12	36	--	08/24/00	235	µg/L	584	µg/L	2298	µg/L	0.005 U	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW13	30	--	03/18/99								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW13	30	--	08/24/00	1150	µg/L	8.25	µg/L	1353.85	µg/L	0.125	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW13	61	--	08/12/00								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW14	110	--	06/01/99								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW14	110	--	08/23/00	0.5 U	µg/L	0.5 U	µg/L	1 U	µg/L	0.0154	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW15	50	--	01/12/00								
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW15	50	--	08/24/00	40500	µg/L	250 U	µg/L	41552	µg/L	0.46	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW16	45	--	12/21/00	2680	µg/L	1020	µg/L	5419	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW16	65	--	08/25/00							0.402	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW16	65	--	12/21/00								
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-01	23	--	09/20/91	6.9	µg/L	2.5	µg/L	68.5	µg/L	7.8	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-05	28	--	09/28/91	0.5 U	µg/L	0.97	µg/L	2.37	µg/L	0.02 U	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-08	--	--	09/17/91	0.5 U	µg/L	0.85	µg/L	1.71	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-19	28	--	09/19/91	100000	µg/L	39000	µg/L	151600	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-21	19.5	--	10/02/91	0.5 U	µg/L	1.2	µg/L	6.4	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-31	29	--	09/24/91	3	µg/L	1.6	µg/L	27.6	µg/L	0.02 U	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-56A	18	22	06/01/00	8	µg/L	5 U	µg/L				
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-56A	60	64	06/02/00							92.26	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-56A	80	84	06/02/00								
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-56A	100	104	06/03/00							0.533	
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-56B	136	140	06/13/00								
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-59A	46	50	06/11/04	5570	µg/L	50 U	µg/L	5972.5	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	M-4	--	--	10/13/94	12	µg/L	0.5 U	µg/L	12	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	M-5	--	--	10/19/94	2100	µg/L	3.7	µg/L	2582.7	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	WS-8-33	23	33	07/09/98	68.1	µg/L	1.29	µg/L	151.84	µg/L	0.726	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	WS-8-59	23	54	07/09/98	20.8	µg/L	1.17	µg/L	24.26	µg/L	0.459	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	WS-9-34	23	34	07/09/98	1 U	µg/L	1 U	µg/L	2 U	µg/L	0.074 J	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-1A	24	28	03/17/98								
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-1A	54	58	03/17/98	1 U	µg/L	1 U	µg/L	2 U	µg/L	0.642	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-2	28	32	08/15/97							0.723	mg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-2	96	100	08/15/97	117	µg/L	4.1	µg/L	162.1	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-3	28.5	32.5	08/20/97	104	µg/L	10 U	µg/L	156.2	µg/L	0.65	mg/L

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Benzene		Toluene		BTEX		Total Cyanide		
								TZW)	TZW)	Concentration	Units	Concentration	Units	Concentration	Units	
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-4			08/14/97	28	32	12	µg/L	1 U	µg/L	12	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-4			08/14/97	50	54	1 U	µg/L	1 U	µg/L	2 U	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-5			08/14/97	29	33						0.071 mg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-5			08/14/97	96	100						0.35 J mg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-6			08/01/97	32	36							
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-6			08/01/97	45	50	1 U	µg/L	1 U	µg/L	2 U	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-7			08/08/97	56	52	1 U	µg/L	1 U	µg/L	2 U	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-8			08/08/97	28	32						0.02 U mg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-8			08/08/97	50	54						0.18 mg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-8			08/08/97	80	84	11.1	µg/L	10 U	µg/L	11.1	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-9			08/15/97	31	35	1 U	µg/L	1 U	µg/L	2 U	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP02-01			03/19/98	32	36	3.48	µg/L	1 U	µg/L	3.48	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-02-02			03/19/98	21	25	4970	µg/L	1000 U	µg/L	4970	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-02-02			03/20/98	54	58						4.04 mg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-02-03			03/20/98	29	33							
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-02-03			03/21/98	54	58	2.94	µg/L	1 U	µg/L	2.94	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-4			09/26/98	64	68						0.498 mg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-4			09/29/98	94	98	87	µg/L	0.5 U	µg/L	87	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-5			10/07/98	91	95	210	µg/L	25 U	µg/L	210	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-6			09/30/98	94	98	220	µg/L	25 U	µg/L	220	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-7			10/02/98	74	78						0.7 mg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-7			10/03/98	94	98	38	µg/L	13 U	µg/L	38	µg/L	
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB1B	149.4	210.3	07/17/07	0.2 J	0.2 J	18	µg/L				0.64 mg/L	
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB1B	149.4	210.3	07/17/07							16 JT	µg/L	
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB1C	393.2	454.2	07/17/07		0.26 J	15	µg/L				1.6 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB1C	393.2	454.2	07/17/07									
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2A2	137.2	167.6	07/17/07		8.8	14	µg/L				71 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2A2	137.2	167.6	07/17/07								3.1 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2B	259.1	320	07/17/07		5.7	41	µg/L				0.14 U	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2C	502.9	563.9	07/17/07		0.14 U	2.7	µg/L				3.2 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2W100	2987	3109	09/12/07		0.14 U	2.6	µg/L				11 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2W100	2987	3109	09/12/07								16 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2W125	3749	3871	09/12/07		0.22 J	9.7	µg/L				28 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2W125	3749	3871	09/12/07								2.6 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2W144	4267	4389	09/12/07		1.1	13	µg/L				97 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2W144	4267	4389	09/12/07									
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2W25	701	823	09/12/07		1.7	21	µg/L				53 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2W25	701	823	09/12/07								0.9 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2W50	1463	1585	09/12/07		0.14 U	2.6	µg/L				120 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2W50	1463	1585	09/12/07								4.4 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2W75	2225	2347	09/12/07		0.14 J	96	µg/L				110 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2W75	2225	2347	09/12/07								12 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB3B	152.4	213.4	07/19/07		0.14 U	0.79	µg/L				0.62 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB3C	396.2	457.2	07/19/07		0.36 J	16	µg/L				4.4 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB4B	152.4	213.4	07/19/07		0.14 U	0.88	µg/L				11 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB4C	396.2	457.2	07/19/07		54	6.3	µg/L				0.67 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB5B	170.7	231.6	07/18/07		2.2	22	µg/L				0.071 mg/L	
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB5B	170.7	231.6	07/18/07									
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB5C	414.5	475.5	07/18/07		2	100	µg/L				0.02 U mg/L	
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB5C	414.5	475.5	07/18/07									
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB5W25	701	823	09/14/07		0.62	5.7	µg/L				4.4 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB5W25	701	823</										

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Benzene		Toluene		BTEX		Total Cyanide	
								TZW)	TZW)	Concentration	Units	Concentration	Units	Concentration	Units
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB5W75	2225	2347	09/14/07			0.33 J	µg/L	4.5	µg/L	7.9 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB5W98.5	2880	3002	09/14/07			0.14 U	µg/L	0.12 J	µg/L	18 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB5W98.5	2880	3002	09/14/07			0.14 U	µg/L	0.14 J	µg/L	4.5 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB6B	152.4	213.4	07/06/07			0.14 U	µg/L	0.12 J	µg/L	0.22 UT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB6C	396.2	457.2	07/06/07			1.8	µg/L	0.14 J	µg/L	0.22 UT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB7B	152.4	213.4	07/05/07			0.15 J	µg/L	0.16 J	µg/L	10 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB7C	396.2	457.2	07/05/07			7.8	µg/L	0.57	µg/L	240 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB7W100	2987	3109	08/29/07			0.36 J	µg/L	1.2	µg/L	170 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB7W100	2987	3109	08/29/07			1.1	µg/L	170	µg/L	520 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB7W125	3749	3871	08/29/07			1.7	µg/L	520	µg/L	66 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB7W125	3749	3871	08/29/07			1.7	µg/L	59	µg/L	120 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB7W25	701	823	08/28/07			0.54	µg/L	50	µg/L	2.4 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB7W25	701	823	08/28/07			0.42 J	µg/L	6.6	µg/L	44 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB7W50	1463	1585	08/29/07			11	µg/L	20	µg/L	12 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB7W50	1463	1585	08/29/07			0.14 U	µg/L	4.3	µg/L	11 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB7W75	2225	2347	08/29/07			0.14 UT	µg/L	11 T	µg/L	16 JT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB8B	152.4	213.4	07/09/07			0.36 J	µg/L	10	µg/L	16 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB8C	396.2	457.2	07/09/07			0.24 J	µg/L	26	µg/L	2.2 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB9B	152.4	213.4	07/09/07			0.14 U	µg/L	1.5	µg/L	53 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB9C	454.2	515.1	07/09/07			0.54	µg/L	50	µg/L	2.4 T	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC1B	173.7	234.7	07/16/07			0.42 J	µg/L	6.6	µg/L	44 T	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC1C	417.6	478.5	07/16/07			0.14 U	µg/L	1.1	µg/L	4.3 T	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC2B	164.6	225.6	07/16/07			0.14 U	µg/L	4.3	µg/L	11 T	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC2C	408.4	469.4	07/16/07			0.14 U	µg/L	11 T	µg/L	16 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC2W100	2987	3109	09/13/07			0.36 J	µg/L	10	µg/L	16 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC2W100	2987	3109	09/13/07			0.46 J	µg/L	11	µg/L	10 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC2W119	3505	3627	09/13/07			0.45 J	µg/L	8	µg/L	7.5 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC2W119	3505	3627	09/13/07			0.14 U	µg/L	4.6	µg/L	34 T	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC2W25	701	823	09/13/07			0.14 U	µg/L	8.6	µg/L	4.8 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC2W25	701	823	09/13/07			0.29 J	µg/L	4.3	µg/L	5.7 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC2W50	1463	1585	09/13/07			0.14 U	µg/L	0.31 J	µg/L	0.31 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC2W50	1463	1585	09/13/07			0.14 U	µg/L	0.22 J	µg/L	3.2 T	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC2W75	2225	2347	09/13/07			0.22 J	µg/L	0.86	µg/L	11 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC3B	152.4	213.4	07/13/07			0.22 J	µg/L	0.65	µg/L	5.3 T	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC3C	396.2	457.2	07/13/07			0.14 U	µg/L	5.3	µg/L	96 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC4B	152.4	213.4	07/13/07			0.27 J	µg/L	85	µg/L	85 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC4C	396.2	457.2	07/13/07			0.49 J	µg/L	190	µg/L	300 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC5B	152.4	213.4	07/12/07			0.14 U	µg/L	0.34 J	µg/L	1.5 T	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC5C	396.2	457.2	07/12/07			0.14 U	µg/L	0.22 J	µg/L	0.56 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC5W25	701	823	09/11/07			0.27 J	µg/L	40	µg/L	500 T	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC5W25	701	823	09/11/07			0.27 J	µg/L	96	µg/L	96 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC5W50	1463	1585	09/11/07			0.26 J	µg/L	96	µg/L	190 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC5W50	1463	1585	09/11/07			0.27 J	µg/L	85	µg/L	300 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC5W75	2225	2347	09/11/07			0.49 J	µg/L	190	µg/L	1.5 T	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC5W75	2225	2347	09/11/07			0.14 U	µg/L	0.34 J	µg/L	0.56 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC5W94	2743	2865	09/11/07			0.14 U	µg/L	0.22 J	µg/L	6.5 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW														

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Sample Date	Benzene		Toluene		BTEX		Total Cyanide	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC7W25	701	823	08/31/07	7.9	µg/L	480	µg/L	130 T	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC7W25	701	823	08/31/07	4.4	µg/L	110	µg/L	130 T	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC7W50	1463	1585	08/31/07								
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC7W50	1463	1585	08/31/07								
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC7W75	2225	2347	09/04/07	2	µg/L	120	µg/L	92 T	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC7W75	2225	2347	09/04/07								
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC8B	158.5	219.5	07/11/07	36	µg/L	6.6	µg/L	44 T	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC8C	402.3	463.3	07/11/07	44	µg/L	5.4 U	µg/L	2.5 T	µg/L		
Far Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC9B	152.4	213.4	07/10/07	0.16 J	µg/L	23	µg/L	6.5 T	µg/L		
Far Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC9C	396.2	457.2	07/10/07	0.77	µg/L	5.7	µg/L	2.7 T	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD1B	152.4	213.4	07/20/07	0.14 U	µg/L	0.25 J	µg/L	0.77 T	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD1C	396.2	457.2	07/20/07	0.14 U	µg/L	0.77	µg/L	4.1 T	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD2B	152.4	213.4	07/20/07	0.14 U	µg/L	0.33 J	µg/L	3.4 T	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD2C	396.2	457.2	07/20/07	0.14 U	µg/L	3.4	µg/L	3.2 T	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD2W100	2987	3109	09/10/07	0.14 U	µg/L	3.2	µg/L				
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD2W100	2987	3109	09/10/07	0.47 J	µg/L	160	µg/L				
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD2W25	701	823	09/10/07					21 T	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD2W25	701	823	09/10/07					71 JT	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD2W50	1463	1585	09/10/07	0.14 U	µg/L	21	µg/L				
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD2W50	1463	1585	09/10/07					88 JT	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD2W75	2225	2347	09/10/07	0.22 J	µg/L	71	µg/L				
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD2W75	2225	2347	09/10/07					15 JT	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD3B	137.2	198.1	07/23/07	0.14 U	µg/L	0.31 J	µg/L	4 T	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD3C	381	442	07/23/07	0.14 U	µg/L	4	µg/L				
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD4B	152.4	213.4	07/23/07	0.14 U	µg/L	0.42 J	µg/L	1.5 T	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD4C	396.2	457.2	07/23/07	0.14 U	µg/L	1.5	µg/L	1.6 T	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD4W25	701	823	09/06/07	0.14 UT	µg/L	1.6 T	µg/L				
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD4W25	701	823	09/06/07					50 JT	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD4W50	1463	1585	09/06/07	0.14 JT	µg/L	50 T	µg/L				
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD4W50	1463	1585	09/06/07					290 JT	µg/L		
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD4W63	1798	1920	09/06/07	0.87	µg/L	290	µg/L				
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD4W63	1798	1920	09/06/07					140 JT	µg/L		
Far Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD5B	152.4	213.4	07/24/07	0.14 U	µg/L	0.72	µg/L	54 T	µg/L		
Far Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD5C	396.2	457.2	07/24/07	17	µg/L	2.5	µg/L	180 T	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS00W2327	701	823	11/01/06	0.14 U	µg/L	0.2 J	µg/L				
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS00W2327	701	823	11/01/06					1.3 JT	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS00W4852	1463	1585	11/01/06	0.28 J	µg/L	0.29 J	µg/L				
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS00W4852	1463	1585	11/01/06					0.5 UT	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS00W6569	1981	2103	11/02/06	0.5 U	µg/L	0.5 U	µg/L				
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS00W6569	1981	2103	11/02/06					0.5 UT	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS01W2327	701	823	12/21/06	0.5 U	µg/L	0.5 U	µg/L				
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS01W2327	701	823	12/21/06					0.5 UT	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS01W46	121.9	182.9	12/21/06	0.5 U	µg/L	0.5 U	µg/L				
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS01W46	121.9	182.9	12/21/06					2.5 JT	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS01W4852	1463	1585	12/26/06	1	µg/L	0.47 J	µg/L				
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS01W4852	1463	1585	12/26/06					0.5 UT	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS01W7377	2225	2347	12/26/06	0.5 U	µg/L	0.5 U	µg/L				
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS01W7377	2225	2347	12/26/06					0.5 UT	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS01W911	274.3	335.3	12/21/06	0.5 U	µg/L	0.5 U	µg/L				
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS01W911</											

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	TZW)	Lower depth (ft-upland GW; ft bml-in-river GW; ft cm-Sediment and	Sample Date	Benzene		Toluene		BTEX		Total Cyanide		
								Upper depth (ft-upland GW; ft bml-in-river GW; ft cm-Sediment and	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS02W4852	1463	1585	12/28/06								0.5 UT	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS02W7377	2225	2347	12/28/06	0.5 U	µg/L	0.5 U	µg/L	0.5 U	µg/L			
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS02W7377	2225	2347	12/28/06									
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS02W911	274.3	335.3	12/27/06	0.5 U	µg/L	0.5 U	µg/L	0.5 U	µg/L	1.7 JT	µg/L	
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS02W911	274.3	335.3	12/27/06									
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W116120	3536	3658	12/20/06	0.29 J	µg/L	0.28 J	µg/L	0.5 UT	µg/L			
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W116120	3536	3658	12/20/06									
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W1315	396.2	457.2	12/18/06	0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L			
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W1315	396.2	457.2	12/18/06									
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W2327	701	823	12/19/06	0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L			
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W2327	701	823	12/19/06									
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W46	121.9	182.9	12/18/06	0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L			
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W46	121.9	182.9	12/18/06							520 JT	µg/L	
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W4852	1463	1585	12/19/06	36	µg/L	12 J	µg/L	0.5 UT	µg/L			
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W4852	1463	1585	12/19/06									
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W7377	2225	2347	12/19/06	0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L			
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W7377	2225	2347	12/19/06									
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W98102	2987	3109	12/19/06	0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L			
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W98102	2987	3109	12/19/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W123127	3749	3871	12/14/06	0.5 U	µg/L	0.5 U	µg/L	0.66 JT	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W123127	3749	3871	12/14/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W148152	4511	4633	12/15/06	0.5 U	µg/L	0.25 J	µg/L	0.5 UT	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W148152	4511	4633	12/15/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W2731	823	944.9	12/12/06	0.5 U	µg/L	0.5 U	µg/L	0.65 JT	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W2731	823	944.9	12/12/06	0.38 J	µg/L	0.15 J	µg/L	1.7 JT	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W46	121.9	182.9	12/12/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W46	121.9	182.9	12/12/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W4852	1463	1585	12/13/06	1.2	µg/L	0.33 J	µg/L	0.21 JT	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W4852	1463	1585	12/13/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W7377	2225	2347	12/13/06	0.21 J	µg/L	0.5 U	µg/L	0.91 JT	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W7377	2225	2347	12/13/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W911	274.3	335.3	12/12/06	0.8	µg/L	0.11 J	µg/L	0.5 UT	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W911	274.3	335.3	12/12/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W98102	2987	3109	12/13/06	0.5 U	µg/L	0.5 U	µg/L	3.3 JT	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W98102	2987	3109	12/13/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05CW100	3048	3048	10/26/06	2.9	µg/L	0.21 J	µg/L	0.5 UT	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS05CW100	3048	3048	10/26/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05W123127	3749	3871	10/27/06	0.5 U	µg/L	0.5 U	µg/L	1.6 JT	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS05W123127	3749	3871	10/27/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05W148152	4511	4633	10/27/06	0.73	µg/L	0.47 J	µg/L	0.5 UT	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS05W148152	4511	4633	10/27/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05W173177	5273	5395	10/30/06	0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS05W173177	5273	5395	10/30/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05W191195	5822	5944	10/31/06	0.5 U	µg/L	0.5 U	µg/L	2.1 T	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS05W191195	5822	5944	10/31/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05W2327	701	823	10/25/06	0.69	µg/L	1.4	µg/L	5.7 JT	µg/L			
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS05W2327	701	823	10/25/06									
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05W46	121.9	182.9	10/24/06	0.79	µg/L	0.47 J	µg/L	3.7 JT				

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Benzene		Toluene		BTEX		Total Cyanide	
								TZW)	TZW)	Concentration	Units	Concentration	Units	Concentration	Units
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05W98102	2987	3109	10/26/06			1	µg/L	0.56	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS05W98102	2987	3109	10/26/06			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W123127	3749	3871	01/18/07			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W123127	3749	3871	01/18/07			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W148152	4511	4633	01/18/07			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W148152	4511	4633	01/18/07			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W2327	701	823	01/17/07			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W2327	701	823	01/17/07			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W46	121.9	182.9	01/15/07			0.62 T	µg/L	0.5 UT	µg/L	2.4 JT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W46	121.9	182.9	01/15/07			100	µg/L	2.1	µg/L	150 T	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W4852	1463	1585	01/17/07			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W4852	1463	1585	01/17/07			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W7377	2225	2347	01/17/07			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W7377	2225	2347	01/17/07			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W911	274.3	335.3	01/15/07			0.5 U	µg/L	0.5 U	µg/L	2.8 JT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W911	274.3	335.3	01/15/07			0.7	µg/L	0.69	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W98102	2987	3109	01/18/07			0.5 U	µg/L	0.5 U	µg/L	0.13 JT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W98102	2987	3109	01/18/07			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07CW100	3048	3048	10/18/06			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07CW100	3048	3048	10/18/06			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W123127	3749	3871	10/18/06			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W123127	3749	3871	10/18/06			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W148152	4511	4633	10/19/06			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W148152	4511	4633	10/19/06			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W170174	5182	5304	10/19/06			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W170174	5182	5304	10/19/06			0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W2327	701	823	10/17/06			0.5 U	µg/L	0.5 U	µg/L	280 JT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W2327	701	823	10/17/06			64	µg/L	12 J	µg/L	93 T	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W46	121.9	182.9	10/16/06			19	µg/L	3	µg/L	620 JT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W46	121.9	182.9	10/16/06			0.34 JT	µg/L	0.5 UT	µg/L	1.1 JT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W4852	1463	1585	10/17/06			220	µg/L	15 J	µg/L	0.16 JT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W4852	1463	1585	10/17/06			0.5 U	µg/L	0.5 U	µg/L	360 T	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W7377	2225	2347	10/18/06			280	µg/L	0.84	µg/L	0.33 JT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W7377	2225	2347	10/18/06			0.33 J	µg/L	0.5 U	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W911	274.3	335.3	10/16/06			0.34 JT	µg/L	0.5 UT	µg/L	440 JT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W911	274.3	335.3	10/16/06			220	µg/L	15 J	µg/L	0.16 JT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W98102	2987	3109	10/18/06			0.5 U	µg/L	0.5 U	µg/L	880 JT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS08W100	3048	3048	10/27/06			560	µg/L	13 J	µg/L	0.5 UT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS08W100	3048	3048	10/27/06			0.5 U	µg/L	0.5 U	µg/L	12 JT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS08W123127	3749	3871	10/27/06			1.2	µg/L	0.3 J	µg/L	7.2 JT	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS08W123127	3749	3871	10/27/06			1.3	µg/L	0.3 J	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS08W46	121.9	182.9	10/25/06								
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS08W46	121.9	182.9	10/25/06								
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS08W4852	1463	1585	10/26/06								
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS08W4852	1463	1585	10/26/06								
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS08W7377	2225	2347	10/26/06								
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered												

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Sample Date	Benzene		Toluene		BTEX		Total Cyanide	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS08W98102	2987	3109	10/27/06					400 T	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09CW100	3048	3048	10/11/06	310	µg/L	0.87	µg/L			83 T	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09CW100	3048	3048	10/11/06			61	µg/L	0.5	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W123127	3749	3871	10/12/06					2.5 JT	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W123127	3749	3871	10/12/06			1.7	µg/L	0.11 J	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W148152	4511	4633	10/12/06					1.1 JT	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W148152	4511	4633	10/12/06			0.83	µg/L	0.14 J	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W173177	5273	5395	10/13/06					2.1 JT	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W173177	5273	5395	10/13/06								
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W2327	701	823	10/09/06			1.7	µg/L	0.11 J	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W2327	701	823	10/09/06					110 T	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W46	121.9	182.9	10/05/06			70	µg/L	0.55	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W46	121.9	182.9	10/05/06					1.1 JT	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W4852	1463	1585	10/10/06			0.5 U	µg/L	0.13 J	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W4852	1463	1585	10/10/06			160	µg/L	2.4	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W7377	2225	2347	10/10/06					730 T	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W7377	2225	2347	10/10/06			470	µg/L	2.8	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W911	274.3	335.3	10/05/06					580 T	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W911	274.3	335.3	10/05/06			370	µg/L	6.5	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W98102	2987	3109	10/11/06					82 JT	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W98102	2987	3109	10/11/06			60	µg/L	0.48 J	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W123127	3749	3871	01/03/07					1.6 JT	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W123127	3749	3871	01/03/07			1.3	µg/L	0.28 J	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W148152	4511	4633	01/03/07					0.47 JT	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W148152	4511	4633	01/03/07			0.47 J	µg/L	0.5 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W2327	701	823	01/02/07			1	µg/L	0.5 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W2327	701	823	01/02/07			710	µg/L	28	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W46	121.9	182.9	01/02/07			0.5	µg/L	0.5 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W46	121.9	182.9	01/02/07					81 T	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W4852	1463	1585	01/02/07			16	µg/L	2.2	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W4852	1463	1585	01/02/07					1 T	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W7377	2225	2347	01/03/07			1	µg/L	0.5 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W7377	2225	2347	01/03/07			0.5 U	µg/L	0.5 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W911	274.3	335.3	01/02/07					1100 T	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W98102	2987	3109	01/03/07			76	µg/L	10 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS11W123127	3749	3871	01/08/07					0.5 UT	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS11W123127	3749	3871	01/08/07			0.5 U	µg/L	0.5 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS11W148152	4511	4633	01/08/07					0.5 UT	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS11W148152	4511	4633	01/08/07			0.5 U	µg/L	0.5 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS11W173177	5151	5273	01/08/07			0.5 U	µg/L	0.5 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS11W173177	5151	5273	01/08/07					0.5 UT	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS11W2327	701	823	01/05/07			0.5 U	µg/L	0.5 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS11W2327	701	823	01/05/07					0.5 UT	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS11W46	121.9	182.9	01/04/07			0.5 U	µg/L	0.5 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS11W46	121.9	182.9	01/04/07					23 JT	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS11W4852	1463	1585	01/05/07			2.5	µg/L	0.39 J	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS11W4852	1463	1585	01/05/07					6.1 JT	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS11W7377	2225	2347	01/05/07			6 T	µg/L	0.12 JT	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS11W7377	2225	2347	01/05/07					6.6 JT	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS11W911	274.3	335.3	01/04/07			6.4	µg/L	0.23			

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and		Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Benzene		Toluene		BTEX		Total Cyanide	
					TZW)	TZW)			Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W123127	3749	3871	01/11/07	17	µg/L	0.11 J	µg/L					
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W123127	3749	3871	01/11/07	0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L			
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W148152	4511	4633	01/11/07							0.5 UT	µg/L	
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W148152	4511	4633	01/11/07	0.5 U	µg/L	0.5 U	µg/L	0.5 UT	µg/L			
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W2327	701	823	01/10/07	0.5 U	µg/L	0.5 U	µg/L	0.15 JT	µg/L			
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W2327	701	823	01/10/07	0.15 JT	µg/L	0.5 UT	µg/L	4.1 JT	µg/L			
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W46	121.9	182.9	01/10/07	0.17 J	µg/L	0.35 J	µg/L	22 JT	µg/L			
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W46	121.9	182.9	01/10/07	0.17 J	µg/L	0.35 J	µg/L	4.1 JT	µg/L			
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W4852	1463	1585	01/10/07	12 T	µg/L	2.5 UT	µg/L	12 T	µg/L			
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W4852	1463	1585	01/10/07	0.18 JT	µg/L	0.18 JT	µg/L	0.18 JT	µg/L			
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W7377	2225	2347	01/10/07	0.5 U	µg/L	0.14 J	µg/L	0.5 UT	µg/L			
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W7377	2225	2347	01/10/07	0.5 U	µg/L	0.14 J	µg/L	12 T	µg/L			
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W911	274.3	335.3	01/10/07	0.5 U	µg/L	0.14 J	µg/L	0.14 JT	µg/L			
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W911	274.3	335.3	01/10/07	0.5 U	µg/L	0.14 J	µg/L	0.14 JT	µg/L			
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W98102	2987	3109	01/11/07	0.5 U	µg/L	0.18 J	µg/L	0.18 JT	µg/L			
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W98102	2987	3109	01/11/07	0.5 U	µg/L	0.18 J	µg/L	0.18 JT	µg/L			
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-B016	0	15	07/27/04									
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-C269-A	0	30	10/28/04									
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-C525-A	0	30	10/26/05	0.077 U	µg/kg	0.3 U	µg/kg	0.3 UT	µg/kg			
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G256	0	27	08/19/04	0.059 U	µg/kg	0.23 U	µg/kg	0.11 JT	µg/kg			
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G258	0	27	08/19/04									
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G259	0	28	08/12/04									
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G263	0	25	08/30/04	16	µg/kg	0.44 U	µg/kg	24.4 T	µg/kg			
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G264	0	30	08/30/04	0.41 J	µg/kg	0.45 U	µg/kg	4.6 JT	µg/kg			
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G265	0	24	08/19/04									
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G269	0	26	08/30/04	0.078 U	µg/kg	0.3 U	µg/kg	0.3 UT	µg/kg			
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G270-1	0	29	07/21/04	0.12 J	µg/kg	0.32 U	µg/kg	0.38 JT	µg/kg			
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G270-2	0	29	07/21/04	0.088 U	µg/kg	0.34 U	µg/kg	0.27 JT	µg/kg			
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G272	0	27	08/19/04									
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G273	0	28	10/07/04	0.073 U	µg/kg	0.28 U	µg/kg	0.43 UT	µg/kg			
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-G274	0	22	10/29/04	1.4	µg/kg	0.24 U	µg/kg	2.54 JT	µg/kg			
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G276	0	29	08/30/04	0.093 U	µg/kg	0.36 U	µg/kg	7.1 T	µg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G278	0	27	08/30/04	0.51 J	µg/kg	0.48 U	µg/kg	15.81 JT	µg/kg			
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G281	0	28	08/19/04									
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-G283	0	27	08/30/04	3.8	µg/kg	4.5	µg/kg	26.2 T	µg/kg			
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G284	0	27	08/30/04	0.09 U	µg/kg	0.35 U	µg/kg	0.35 UT	µg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G288	0	30	09/13/04	780	µg/kg	6.2	µg/kg	3273.2 T	µg/kg			
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G289	0	27	08/19/04	0.091 U	µg/kg	0.35 U	µg/kg	0.24 JT	µg/kg			
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-G292	0	28	09/13/04	0.072 U	µg/kg	0.28 U	µg/kg	0.53 JT	µg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G294-1	0	26	07/21/04	1.7	µg/kg	0.65 U	µg/kg	14.6 T	µg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G294-2	0	29	07/21/04	0.42 JT	µg/kg	0.33 UT	µg/kg	4.84 JT	µg/kg			
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-G298	0	27	09/13/04	1100	µg/kg	27	µg/kg	7097 T	µg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G301	0	27	09/13/04	0.075 U	µg/kg	0.29 U	µg/kg	0.29 UT	µg/kg			
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G521	0	28	09/13/04	0.081 U	µg/kg	0.31 U	µg/kg	0.31 UT	µg/kg			
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LWG0106B025SDS015C00	0	15	10/14/02									
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-GS4A	0	26	12/01/05	16	µg/kg	11 U	µg/kg	493 T	µg/kg			
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-GS4A-2	0	26	12/01/05	64	µg/kg	52	µg/kg	1500 T	µg/kg			
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-GS7B	0	24	12/01/05	0.065 U	µg/kg	0.25 U	µg/kg	0.25 UT	µg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-GS7D	0	30	12/01/05	0.28 J	µg/kg	0.33 U	µg/kg	0.28 JT	µg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCAF97S017W4149	0	10	06/10/97									
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCDRD05PG05050	0	30	05/27/05	0.12 U	µg/kg							

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	TZW)	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Benzene		Toluene		BTEX		Total Cyanide	
								Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Concentration	Units	Concentration	Units	Concentration	Units
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCGSD01AN0105_00-10	0	10	04/10/01	0.02 U	µg/kg	0.02 U	µg/kg	0.02 UT	µg/kg		
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	WLCGSD01AN0201_00-10	0	10	04/11/01	0.02 U	µg/kg	0.02 U	µg/kg	0.42 JT	µg/kg		
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGSD01AN0202_00-10	0	10	04/11/01	0.02 U	µg/kg	0.02 U	µg/kg	0.24 JT	µg/kg		
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGSD01AN0203_00-10	0	10	04/11/01	0.02 U	µg/kg	0.02 U	µg/kg	0.14 JT	µg/kg		
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGSD01AN0204_00-10	0	10	04/11/01	0.05 J	µg/kg	0.02 U	µg/kg	0.23 JT	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCGSD01AN0205_00-10	0	10	04/11/01	0.02 U	µg/kg	0.02 U	µg/kg	0.03 UT	µg/kg		
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSB2S02	0	60.96	09/21/07	0.19 U	µg/kg	1.1 J	µg/kg	6.9 JT	µg/kg		
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSB5S02	0	60.96	09/21/07	4600	µg/kg	890	µg/kg	140000 T	µg/kg		
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSB7S02	0	60.96	08/30/07	0.18 U	µg/kg	0.41 J	µg/kg	2.6 JT	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSC5S02	0	60.96	09/20/07	0.12 U	µg/kg	1.2 J	µg/kg	1.2 JT	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSC7S02	0	60.96	09/19/07	1500	µg/kg	45 J	µg/kg	12000 JT	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSD2S02	0	60.96	09/20/07	0.12 U	µg/kg	0.39 J	µg/kg	0.39 JT	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSD4S02	0	60.96	09/20/07	0.11 U	µg/kg	0.43 J	µg/kg	0.43 JT	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCT0198GRAB04GRAB04	0	10	09/14/98								
Offshore Groundwater Discharge Zone	Sediment	--	--	WLR0797WRBC22WRBC22	0	23	07/25/97								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WS198SD0620	0	10	09/20/97								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WS198SD0630	0	10	09/20/97								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WS198SD0640	0	10	09/20/97								
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	WR-WS198SD0650	0	10	09/20/97								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WS198SD0670	0	10	09/21/97								
Low-To-No Groundwater Discharge Zone	TZW	Peeper	--	LWG2-P-GSC1B	0	38	11/29/05	0.14 U	µg/L	0.11 U	µg/L	80.8 T	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Peeper	--	LWG2-P-GSC7D	0	38	11/29/05	42	µg/L	28	µg/L	0.74 JT	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Trident	unfiltered	LWG2-T30-GS2A	30	30	10/25/05					333 T	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Trident	filtered	LWG2-T30-GS2A-FILT	30	30	10/25/05	250	µg/L	16	µg/L	733 T	µg/L		
Variable Nearshore Groundwater Discharge Zone	TZW	Trident	unfiltered	LWG2-T30-GS7B	30	30	10/25/05								
Low-To-No Groundwater Discharge Zone	TZW	Trident	unfiltered	LWG2-T30-GS8A	30	30	10/24/05	540	µg/L	11	µg/L	0.33 JT	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Trident	filtered	LWG2-T30-GS8A-FILT	30	30	10/24/05	0.14 U	µg/L	0.24 U	µg/L	17.8 T	µg/L		
Offshore Groundwater Discharge Zone	TZW	Trident	unfiltered	LWG2-T30-GS8D	30	30	10/24/05								
Offshore Groundwater Discharge Zone	TZW	Trident	filtered	LWG2-T30-GS8D-FILT	30	30	10/24/05	14	µg/L	0.79 U	µg/L	3.67 T	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Trident	unfiltered	LWG2-T90-GS7D	150	150	10/25/05								
Offshore Groundwater Discharge Zone	TZW	Trident	unfiltered	LWG2-T90-GS8D	150	150	10/24/05	1.8	µg/L	0.56 U	µg/L	47.9 T	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	filtered	WLCGSG07GSB1A	27.43	57.91	07/17/07							18 JT	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB1A	27.43	57.91	07/17/07								
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	filtered	WLCGSG07GSB2A1	45.72	76.2	07/17/07	0.14 U	µg/L	1.6	µg/L	60 T	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB2A1	45.72	76.2	07/17/07								
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB3A	30.48	60.96	07/19/07	0.16 J	µg/L	52	µg/L	0.79 T	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	filtered	WLCGSG07GSB4A	30.48	60.96	07/19/07	0.14 U	µg/L	0.68	µg/L	1 JT	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB4A	30.48	60.96	07/19/07								
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	filtered	WLCGSG07GSB5A	48.77	79.25	07/18/07	0.14 U	µg/L	4.4	µg/L	46 T	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB5A	48.77	79.25	07/18/07								
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB6A	30.48	60.96	07/06/07	1.5	µg/L	7.8	µg/L	0.27 JT	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB7A	30.48	60.96	07/05/07	0.14 U	µg/L	0.11 U	µg/L	1.2 JT	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB7PWE071004	(blank)	45	10/04/07	170	µg/L	32	µg/L	4.5 JT	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB7PWE071005	(blank)	45	10/05/07	0.19 J	µg/L	2.6	µg/L	3.3 JT	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB7PWHS071005	(blank)	45	10/05/07	0.24 J	µg/L	1.1 J	µg/L	3.1 JT	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB7PWLS071005	(blank)	45	10/05/07	0.24 J	µg/L	0.82	µg/L	2.7 JT	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB7PWLS071006	(blank)	45	10/06/07	0.19 J	µg/L	1.2	µg/L	3.4 JT	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB8A	30.48	60.96	07/09/07	0.98	µg/L	110	µg/L	130 T	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSB9A	45.72	76.2	07/09/07	0.27 J	µg/L	1.9	µg/L	1.5 T	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC1A	51.82	82.3	07/16/07	0.14 U	µg/L	2.4	µg/L	7.8 JT	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC2A	73.15	103.6	07/16/07	3.6</td							

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Benzene		Toluene		BTEX		Total Cyanide	
								TZW)	TZW)	Concentration	Units	Concentration	Units	Concentration	Units
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7A	30.48	60.96	07/11/07	0.14 U	µg/L	1.5	µg/L	1.8 JT	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWE071004	(blank)	45	10/04/07	0.14 U	µg/L	0.48 J	µg/L	3900 JT	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWE071005	(blank)	45	10/05/07	3000	µg/L	28 J	µg/L	6100 JT	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWSH071004	(blank)	45	10/04/07	4800	µg/L	38 J	µg/L	3000 JT	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWSH071005	(blank)	45	10/05/07	2300	µg/L	21 J	µg/L	4100 JT	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWSL071004	(blank)	45	10/04/07	3100 J	µg/L	94 J	µg/L	3500 JT	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWSL071005	(blank)	45	10/05/07	2700	µg/L	26 J	µg/L	5600 JT	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWSL071006	(blank)	45	10/06/07	4400	µg/L	42 J	µg/L	5800 T	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC8A	36.58	67.06	07/11/07	2.8	µg/L	82	µg/L	59 JT	µg/L		
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC9A	30.48	60.96	07/10/07	1.8	µg/L	0.74	µg/L	23 JT	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD1A	30.48	60.96	07/20/07	0.14 UT	µg/L	2.7 T	µg/L	0.25 JT	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD2A	30.48	60.96	07/20/07	0.14 U	µg/L	4.1	µg/L	0.33 JT	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD3A	15.24	45.72	07/23/07	0.22 J	µg/L	88	µg/L	0.31 JT	µg/L		
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD4A	30.48	60.96	07/23/07	0.14 U	µg/L	15	µg/L	0.42 JT	µg/L		
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5A	30.48	60.96	07/24/07	0.35 J	µg/L	140	µg/L	1.3 JT	µg/L		
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5PWE071004	(blank)	45	10/04/07	14	µg/L	21	µg/L	0.75 T	µg/L		
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5PWE071005	(blank)	45	10/05/07	0.14 U	µg/L	0.75	µg/L	0.78 JT	µg/L		
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5PWSH071004	(blank)	45	10/04/07	0.14 UJ	µg/L	0.78 J	µg/L	0.22 UT	µg/L		
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5PWSH071005	(blank)	45	10/05/07	0.14 U	µg/L	0.11 U	µg/L	0.22 UJT	µg/L		
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5PWSL071005	(blank)	45	10/05/07	0.14 UJ	µg/L	0.11 UJ	µg/L	1.1 JT	µg/L		
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5PWSL071006	(blank)	45	10/06/07	0.14 UJ	µg/L	1.1 J	µg/L	0.2 JT	µg/L		

Notes:

-- Indicates no data are available

BTEX - benzene, toluene, ethylbenzene, and xylenes

COI - contaminant of interest

GW - groundwater

TZW - transition zone water

Reason codes for qualifiers:

J - The associated numerical value is an estimated quantity.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:

T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in

preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and		Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Amenable Cyanide		Benzo(a)pyrene		Naphthalene		Arsenic		
					TZW)	TZW)		Sample Date	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW1	22	--	03/29/96								5 U	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW1	22	--	08/24/00	1.89	mg/L	0.1 U	µg/L	403	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW2	61	--	08/12/00	0.09	mg/L	0.1 U	µg/L	0.1 U	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW3	26	--	08/22/00	0.18	mg/L							
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW3	56	--	03/18/99								11 U	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW3	56	--	08/22/00									
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW4	57	--	03/19/99								20	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW4	57	--	08/15/00									
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW4	57	--	08/23/00	0.26	mg/L	0.207	µg/L	3780	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW5	100	--	08/23/00	0.298	mg/L	2.5 U	µg/L	11900	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW5	175	--	09/23/98	0.01 U	mg/L	2.6	µg/L	1300	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW6	32	--	05/31/94								14	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW6	61	--	08/27/93									
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW8	29	--	08/24/00								19	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW8	56	--	03/19/99									
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW8	56	--	08/24/00	0.153	mg/L			10400	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW9	29	--	03/17/99								11 U	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW9	29	--	08/11/00	0.01	mg/L	0.1 U	µg/L	0.1 U	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW10	25	--	02/24/93								52	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW10	25	--	05/31/94									
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW10	61	--	08/12/00	0.0321	mg/L	7	µg/L	11400	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW11	32	--	05/31/94	0.01 U	mg/L	24	µg/L	30200	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW12	36	--	08/24/00	0.005 U	mg/L	0.5 U	µg/L	554	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW13	30	--	03/18/99								19	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW13	30	--	08/24/00	0.0552	mg/L	0.5 U	µg/L	78.6	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW13	61	--	08/12/00									
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW14	110	--	06/01/99								23	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW14	110	--	08/23/00	0.0154	mg/L	0.05 U	µg/L	0.05 U	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW15	50	--	01/12/00								46	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW15	50	--	08/24/00	0.418	mg/L	2.5 U	µg/L	6130	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW16	45	--	12/21/00									
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW16	65	--	08/25/00	0.201	mg/L	3.01	µg/L	8140	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW16	65	--	12/21/00									
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-01	23	--	09/20/91									
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-05	28	--	09/28/91									
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-08	--	--	09/17/91									
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-19	28	--	09/19/91									
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-21	19.5	--	10/02/91									
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-31	29	--	09/24/91									
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-56A	18	22	06/01/00									
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-56A	60	64	06/02/00									
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-56A	80	84	06/02/00									
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-56A	100	104	06/03/00	0.156							405	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-56B	136	140	06/13/00									
--	Upland GW	--	Organics=Total, Metals=Dissolved	B-59A	46	50	06/11/04									
--	Upland GW	--	Organics=Total, Metals=Dissolved	M-4	--	--	10/13/94									
--	Upland GW	--	Organics=Total, Metals=Dissolved	M-5	--	--	10/19/94									
--	Upland GW	--	Organics=Total, Metals=Dissolved	WS-8-33	23	33	07/09/98	0.08 U	mg/L	0.26	µg/L	77.6	µg/L		19.8	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	WS-8-59	23	54	07/09/98	0.04 U	mg/L	0.1 U	µg/L	0.63	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	WS-9-34	23	34	07/09/98	0.04 U,J	mg/L	0.1 U	µg/L	0.13	µg/L		5.56 U	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-1A	24	28	03/17/98								5 U	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-1A	54	58	03/17/98	0.064	mg/L	0.1 U	µg/L	17.5 J	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-2	28	32	08/15/97									
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-2	96	100	08/15/97									
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-3	28.5	32.5	08/20/97									
								4.23	µg/L	5.8	µg/L	214	µg/L		16.1	µg/L

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Amenable Cyanide		Benzo(a)pyrene		Naphthalene		Arsenic		
							TZW)	TZW)	Sample Date	Concentration	Units	Concentration	Units	Concentration	Units
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-4	28	32	08/14/97			2 U	µg/L	2.96	µg/L	8	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-4	50	54	08/14/97			2 U	µg/L	19.4	µg/L	33.9	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-5	29	33	08/14/97			0.1 U	µg/L	0.91	µg/L	5 U	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-5	96	100	08/14/97			2 U	µg/L	2 U	µg/L	5 U	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-6	32	36	08/01/97			2 U	µg/L	2 U	µg/L	19.4	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-6	45	50	08/01/97			2 U	µg/L	2 U	µg/L	5 U	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-7	56	52	08/08/97			2 U	µg/L	2 U	µg/L	5 U	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-8	28	32	08/08/97			2 U	µg/L	2 U	µg/L	19.4	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-8	50	54	08/08/97			2 U	µg/L	2 U	µg/L	29.5	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-8	80	84	08/08/97			2 U	µg/L	2 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	P-9	31	35	08/15/97			2.48	µg/L	1030	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP02-01	32	36	03/19/98			0.1 U	µg/L	0.94	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-02-02	21	25	03/19/98			0.032	µg/L	0.4	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-02-02	54	58	03/20/98			0.02 U	µg/L	0.14	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-02-03	29	33	03/20/98			0.02 U	µg/L	0.2	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-02-03	54	58	03/21/98			0.02 U	µg/L	0.036 U	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-4	64	68	09/26/98			0.02 U	µg/L	180	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-4	94	98	09/29/98			0.026	µg/L	2.6	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-5	91	95	10/07/98			0.005 U	mg/L	4	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-6	94	98	09/30/98			0.005 U	mg/L	4.2	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-7	74	78	10/02/98			0.005 U	mg/L	6.2	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	GP-7	94	98	10/03/98			0.005 U	mg/L	1	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB1B	149.4	210.3	07/17/07	0.005 U	mg/L	14	µg/L	8.73	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB1B	149.4	210.3	07/17/07	0.005 U	mg/L	29	µg/L	5.7	µg/L	19.6	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB1C	393.2	454.2	07/17/07	0.005 U	mg/L	0.072	µg/L	9.01	µg/L	10.9	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB1C	393.2	454.2	07/17/07	0.023	mg/L	50	µg/L	1.59	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2A2	137.2	167.6	07/17/07	0.023	mg/L	180	µg/L	26.6	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2A2	137.2	167.6	07/17/07	0.026	µg/L	110	µg/L	16.8	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2B	259.1	320	07/17/07	0.005 U	mg/L	4	µg/L	11	µg/L	16.1	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2C	502.9	563.9	07/17/07	0.005 U	mg/L	4.2	µg/L	2.96	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2W100	2987	3109	09/12/07	0.005 U	mg/L	6.2	µg/L	14.6	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2W100	2987	3109	09/12/07	0.005 U	mg/L	0.012 U	µg/L	24	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2W125	3749	3871	09/12/07	0.005 U	mg/L	2.9	µg/L	2.09	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2W125	3749	3871	09/12/07	0.005 U	mg/L	31	µg/L	40.4	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2W144	4267	4389	09/12/07	0.005 U	mg/L	0.53 J	µg/L	0.07 UJ	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2W144	4267	4389	09/12/07	0.005 U	mg/L	0.0044 U	µg/L	48	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2W25	701	823	09/12/07	0.005 U	mg/L	0.67 J	µg/L	11.2	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2W25	701	823	09/12/07	0.005 U	mg/L	94	µg/L	1.32	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2W50	1463	1585	09/12/07	0.005 U	mg/L	40 J	µg/L	9.98	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2W50	1463	1585	09/12/07	0.005 UJ	mg/L	81	µg/L	4.02	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB2W75	2225	2347	09/12/07	0.005 U	mg/L	9.4	µg/L	4.61	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB2W75	2225	2347	09/12/07	0.005 UJ	mg/L	110 T	µg/L	4.91	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB3B	152.4	213.4	07/19/07	0.005 UJ	mg/L	0.017 J	µg/L	4.89	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB3C	396.2	457.2	07/19/07	0.005 UJ	mg/L	53	µg/L	19.7	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB4B	152.4	213.4	07/19/07	0.005 UJ	mg/L	6.3	µg/L	11.2	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB4C	396.2	457.2	07/19/07	0.005 UJ	mg/L	94	µg/L	1.32	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB5B	170.7	231.6	07/18/07	0.005 UJ	mg/L	40 J	µg/L	2.94	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB5B	170.7	231.6	07/18/07	0.005 UJ	mg/L	81	µg/L	4.89	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB5C	414.5	475.5	07/18/07	0.005 UJ	mg/L	9.4	µg/L	3.58 T	µg/L		

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Amenable Cyanide		Benzo(a)pyrene		Naphthalene		Arsenic	
								TZW)	TZW)	Concentration	Units	Concentration	Units	Concentration	Units
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB5W75	2225	2347	09/14/07					170	µg/L	3.72	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB5W98.5	2880	3002	09/14/07	0.005 U	mg/L	0.0053 J	µg/L	0.79	µg/L	0.79	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB5W98.5	2880	3002	09/14/07					350	µg/L	10	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB6B	152.4	213.4	07/06/07	0.005 U	mg/L	3.9	µg/L	22	µg/L	23.6 J	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB6C	396.2	457.2	07/06/07	0.008 J	mg/L	3.4	µg/L	0.57 J	µg/L	5.45 J	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB7B	152.4	213.4	07/05/07	0.005 U	mg/L	0.26	µg/L	54	µg/L	12.2 J	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB7C	396.2	457.2	07/05/07	0.005 U	mg/L	2	µg/L	850	µg/L	1.68 J	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB7W100	2987	3109	08/29/07					9.7	µg/L	0.73	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB7W100	2987	3109	08/29/07					8.5	µg/L	3.13	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB7W125	3749	3871	08/29/07	0.005 U	mg/L	2.9	µg/L	0.35 J	µg/L	0.35 J	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB7W125	3749	3871	08/29/07					1.35	µg/L	4.5	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB7W25	701	823	08/28/07	0.005 U	mg/L	0.74	µg/L	64	µg/L	5.18	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB7W25	701	823	08/28/07					4.08	µg/L	4.08	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB7W50	1463	1585	08/29/07	0.005 U	mg/L	1.7	µg/L	14	µg/L	6.79	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB7W50	1463	1585	08/29/07					5.52	µg/L	8.99	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSB7W75	2225	2347	08/29/07	0.005 U	mg/L	0.49	µg/L	2.1	µg/L	75.7	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB8B	152.4	213.4	07/09/07	0.005 U	mg/L	0.81	µg/L	0.11	µg/L	7.05	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB8C	396.2	457.2	07/09/07	0.005 U	mg/L	2.6	µg/L	26	µg/L	2.68	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB9B	152.4	213.4	07/09/07	0.005 U	mg/L	0.26	µg/L	2.6	µg/L	21.9	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSB9C	454.2	515.1	07/09/07	0.005 U	mg/L	22	µg/L	430	µg/L	16.7	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC1B	173.7	234.7	07/16/07	0.005 U	mg/L	0.5	µg/L	478.5	µg/L	8.6	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC1C	417.6	478.5	07/16/07	0.005 U	mg/L	1.7	µg/L	7.51	µg/L	3.2	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC2B	164.6	225.6	07/16/07	0.005 U	mg/L	56	µg/L	29 T	µg/L	4.74 T	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC2C	408.4	469.4	07/16/07	0.005 U	mg/L	21	µg/L	0.87	µg/L	0.87	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC2W100	2987	3109	09/13/07	0.005 UT	mg/L	1.3 T	µg/L	400	µg/L	4.87	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC2W100	2987	3109	09/13/07					0.07 UJ	µg/L	3.63	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC2W119	3505	3627	09/13/07	0.024	mg/L	0.011 J	µg/L	340	µg/L	0.07 UJ	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC2W119	3505	3627	09/13/07					0.07 UJ	µg/L	0.07 UJ	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC2W25	701	823	09/13/07	0.005 U	mg/L	0.005 U	µg/L	140	µg/L	1.64	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC2W50	1463	1585	09/13/07	0.005 U	mg/L	0.005 U	µg/L	260	µg/L	5.05	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC2W50	1463	1585	09/13/07	0.005 U	mg/L	0.0044 U	µg/L	430	µg/L	7.28	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC2W75	2225	2347	09/13/07	0.005 U	mg/L	32	µg/L	6.8	µg/L	1.46	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC3B	152.4	213.4	07/13/07	0.005 U	mg/L	25	µg/L	0.93	µg/L	2.16	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC3C	396.2	457.2	07/13/07	0.005 U	mg/L	0.093	µg/L	0.093	µg/L	1.61	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC4B	152.4	213.4	07/13/07	0.005 U	mg/L	1.7	µg/L	5	µg/L	3.36	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC4C	396.2	457.2	07/13/07	0.005 U	mg/L	0.005 J	µg/L	0.03	µg/L	2.79	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC5B	152.4	213.4	07/12/07	0.003 U	mg/L	0.093	µg/L	0.003 U	µg/L	0.55	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC5C	396.2	457.2	07/12/07	0.003 U	mg/L	0.0045 J	µg/L	0.16	µg/L	12.9	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC5W25	701	823	09/11/07	0.005 U	mg/L	0.0044 U	µg/L	0.83	µg/L	0.83	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC5W25	701	823	09/11/07	0.005 U	mg/L	1 J	µg/L	0.35 UJ	µg/L	0.07 UJ	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC5W50	1463	1585	09/11/07	0.005 U	mg/L	0.0043 U	µg/L	0.39 J	µg/L	2.03	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC5W50	1463	1585	09/11/07	0.005 U	mg/L	0.0043 U	µg/L	1.25	µg/L	3.25	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC5W75	2225	2347	09/11/07	0.005 U	mg/L	0.0043 U	µg/L	0.79 J	µg/L	1.46	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC5W75	2225	2347	09/11/07	0.005 U	mg/L	0.0043 U	µg/L	0.039	µg/L	1.17	µg/L

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Amenable Cyanide		Benzo(a)pyrene		Naphthalene		Arsenic	
								TZW)	TZW)	Concentration	Units	Concentration	Units	Concentration	Units
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC7W25	701	823	08/31/07	0.005 U	mg/L	4.8	µg/L	480	µg/L	0.46	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC7W25	701	823	08/31/07	0.005 U	mg/L	2.3	µg/L	320	µg/L	1.09	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC7W50	1463	1585	08/31/07	0.005 U	mg/L	5.5	µg/L			1.87	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC7W50	1463	1585	08/31/07	0.005 U	mg/L			320	µg/L	2.05	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSC7W75	2225	2347	09/04/07	0.005 U	mg/L					1.71 J	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC7W75	2225	2347	09/04/07	0.005 U	mg/L			300	µg/L	2.22 J	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC8B	158.5	219.5	07/11/07	0.005 U	mg/L	12	µg/L	0.028	µg/L	6.8	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC8C	402.3	463.3	07/11/07	0.005 U	mg/L	0.049	µg/L	0.042	µg/L	8.2	µg/L
Far Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC9B	152.4	213.4	07/10/07	0.005 U	mg/L	0.12	µg/L	0.039	µg/L	20.2	µg/L
Far Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSC9C	396.2	457.2	07/10/07	0.005 U	mg/L	0.018 J	µg/L	0.0067 JT	µg/L	28 T	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD1B	152.4	213.4	07/20/07	0.005 U	mg/L	3.3	µg/L	0.16	µg/L	11.5	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD1C	396.2	457.2	07/20/07	0.005 U	mg/L	1.3	µg/L	0.26	µg/L	6.04	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD2B	152.4	213.4	07/20/07	0.005 U	mg/L	0.0058 J	µg/L	0.022	µg/L	15.6	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD2C	396.2	457.2	07/20/07	0.005 U	mg/L	0.043	µg/L	0.043	µg/L	14.5	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD2W100	2987	3109	09/10/07	0.005 U	mg/L	0.11	µg/L			0.76	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD2W100	2987	3109	09/10/07	0.005 U	mg/L			0.074	µg/L	2.34	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD2W25	701	823	09/10/07	0.005 U	mg/L	0.068	µg/L			3.76	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD2W25	701	823	09/10/07	0.005 U	mg/L			0.051	µg/L	4.18	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD2W50	1463	1585	09/10/07	0.005 U	mg/L	0.0044 U	µg/L			0.07 UJ	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD2W50	1463	1585	09/10/07	0.005 U	mg/L			2.1	µg/L	2.04	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD2W75	2225	2347	09/10/07	0.005 U	mg/L	0.0086 UJ	µg/L			1.97	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD2W75	2225	2347	09/10/07	0.005 U	mg/L			0.12	µg/L	3.11	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD3B	137.2	198.1	07/23/07	0.005 UJ	mg/L			0.003 U	µg/L	58.4 J	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD3C	381	442	07/23/07	0.005 UJ	mg/L			0.14	µg/L	34.1 J	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD4B	152.4	213.4	07/23/07	0.005 UJ	mg/L	0.0047 J	µg/L	0.029	µg/L	37.2 J	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD4C	396.2	457.2	07/23/07	0.005 UJ	mg/L			0.023 T	µg/L	35.7 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD4W25	701	823	09/06/07	0.005 UJT	mg/L					54.2 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD4W25	701	823	09/06/07	0.005 UT	mg/L			30 T	µg/L	51.1 JT	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD4W50	1463	1585	09/06/07	0.005 UT	mg/L	6.3 T	µg/L			30.5 J	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD4W50	1463	1585	09/06/07	0.005 U	mg/L	0.34	µg/L			24.5 J	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSG07GSD4W63	1798	1920	09/06/07	0.005 U	mg/L			12	µg/L	27.3 J	µg/L
Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD4W63	1798	1920	09/06/07	0.005 U	mg/L					19.5 J	µg/L
Far Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD5B	152.4	213.4	07/24/07	0.005 UJ	mg/L	0.013 J	µg/L	42	µg/L	31.8 J	µg/L
Far Offshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSG07GSD5C	396.2	457.2	07/24/07	0.005 UJ	mg/L	0.0044 J	µg/L	1000	µg/L	28.4 J	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS00W2327	701	823	11/01/06	0.005 U	mg/L	0.0064 J	µg/L	22	µg/L	0.7	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS00W2327	701	823	11/01/06	0.005 U	mg/L	0.02 U	µg/L	24	µg/L	0.8	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS00W4852	1463	1585	11/01/06	0.01 U	mg/L	0.01 J	µg/L	0.024	µg/L	1.8	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS00W4852	1463	1585	11/01/06	0.01 U	mg/L	0.023 U	µg/L	0.027	µg/L	2.5	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS00W6569	1981	2103	11/02/06	0.01 U	mg/L	0.0085 J	µg/L	0.02 U	µg/L	1.64	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS00W6569	1981	2103	11/02/06	0.01 U	mg/L	0.02 U	µg/L	0.02 U	µg/L	4.06	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS01W2327	701	823	12/21/06	0.0054 J	mg/L	0.025	µg/L	0.098	µg/L	4.61	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS01W2327	701	823	12/21/06	0.0054 J	mg/L	0.015 J	µg/L	0.02	µg/L	6.34	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS01W46	121.9	182.9	12/21/06	0.01 U	mg/L	0.0053 J	µg/L	7.7	µg/L	2.19	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS01W46	121.9	182.9	12/21/06	0.01 U	mg/L	0.0049 J	µg/L	9.1	µg/L	4.4	µg/L
Low-To-No Ground															

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Amenable Cyanide		Benzo(a)pyrene		Naphthalene		Arsenic	
								TZW)	TZW)	Concentration	Units	Concentration	Units	Concentration	Units
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS02W4852	1463	1585	12/28/06			0.021 U	µg/L	0.048	µg/L	4.03	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS02W7377	2225	2347	12/28/06	0.01 U	mg/L	0.022 U	µg/L	0.014 J	µg/L	4.92	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS02W7377	2225	2347	12/28/06			0.021 U	µg/L	0.012 J	µg/L	4.97	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS02W911	274.3	335.3	12/27/06	0.006 J	mg/L	0.02 U	µg/L	150	µg/L	5.02	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS02W911	274.3	335.3	12/27/06			0.034 U	µg/L	170	µg/L	7.74	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W116120	3536	3658	12/20/06	0.01 U	mg/L	6.8	µg/L	0.026	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W116120	3536	3658	12/20/06			0.02 U	µg/L	0.02 J	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W1315	396.2	457.2	12/18/06	0.01 U	mg/L	0.02 U	µg/L	2	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W1315	396.2	457.2	12/18/06			0.02 U	µg/L	3.8	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W2327	701	823	12/19/06	0.01 U	mg/L	0.19	µg/L	0.16	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W2327	701	823	12/19/06			0.02 U	µg/L	0.22	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W46	121.9	182.9	12/18/06	0.01 U	mg/L	0.011 J	µg/L	2000	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W46	121.9	182.9	12/18/06			1.2	µg/L	5700	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W4852	1463	1585	12/19/06	0.008 J	mg/L	34	µg/L	0.038	µg/L	2.58	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W4852	1463	1585	12/19/06			0.02 U	µg/L	0.076	µg/L	10.6	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W7377	2225	2347	12/19/06	0.009 J	mg/L	0.0097 J	µg/L	0.057	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W7377	2225	2347	12/19/06			0.021 U	µg/L	0.076	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS03W98102	2987	3109	12/19/06	0.01 U	mg/L	0.034	µg/L	0.091	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS03W98102	2987	3109	12/19/06			0.02 U	µg/L	0.11	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W123127	3749	3871	12/14/06	0.01 U	mg/L	0.026	µg/L	0.02 U	µg/L	1.19	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W123127	3749	3871	12/14/06			0.02 U	µg/L	0.16	µg/L	3.47	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W148152	4511	4633	12/15/06			0.088	µg/L	0.02 U	µg/L	2.38	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W148152	4511	4633	12/15/06			0.02 U	µg/L	0.02 U	µg/L	2.67	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W2731	823	944.9	12/12/06			0.02 U	µg/L	0.19	µg/L	4.89	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W2731	823	944.9	12/12/06			0.02 U	µg/L	0.39	µg/L	6.22	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W46	121.9	182.9	12/12/06	0.01 UJ	mg/L	0.12	µg/L	1.2	µg/L	10.8	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W46	121.9	182.9	12/12/06			0.029 U	µg/L	2.2	µg/L	9.5	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W4852	1463	1585	12/13/06	0.01 UJ	mg/L	0.8	µg/L	0.19	µg/L	17.3	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W4852	1463	1585	12/13/06			0.02 U	µg/L	2.7	µg/L	14.1	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W7377	2225	2347	12/13/06	0.01 UJ	mg/L	0.57	µg/L	0.22	µg/L	5.71	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W7377	2225	2347	12/13/06			0.02 U	µg/L	0.33	µg/L	5.14	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W911	274.3	335.3	12/12/06	0.01 UJ	mg/L	0.15	µg/L	0.02 U	µg/L	10.7	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W911	274.3	335.3	12/12/06			0.02 U	µg/L	0.02 U	µg/L	14.1	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS04W98102	2987	3109	12/13/06	0.005 J	mg/L	0.53	µg/L	0.037 U	µg/L	0.037 U	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS04W98102	2987	3109	12/13/06			0.037 U	µg/L	2.2 J	µg/L	1.82	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05CW100	3048	3048	10/26/06	0.01 UJ	mg/L	0.19 J	µg/L	0.078	µg/L	17.5	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS05CW100	3048	3048	10/26/06			0.02 U	µg/L	0.02 U	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05W123127	3749	3871	10/27/06	0.01 U	mg/L	0.013 J	µg/L	0.3	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS05W123127	3749	3871	10/27/06			0.034 U	µg/L	0.43	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05W148152	4511	4633	10/27/06	0.005 J	mg/L	0.037	µg/L	0.36	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS05W148152	4511	4633	10/27/06			0.02 U	µg/L	0.14	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05W173177	5273	5395	10/30/06	0.01 U	mg/L	0.0059 J	µg/L	0.13	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS05W173177	5273	5395	10/30/06			0.02 U	µg/L	0.19	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05W191195	5822	5944	10/31/06	0.01 U	mg/L	0.099	µg/L	0.13	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS05W191195	5822	59									

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Amenable Cyanide		Benzo(a)pyrene		Naphthalene		Arsenic	
								TZW)	TZW)	Concentration	Units	Concentration	Units	Concentration	Units
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS05W98102	2987	3109	10/26/06	0.01 U	mg/L	0.15	µg/L	0.054	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS05W98102	2987	3109	10/26/06			0.02 U	µg/L	0.02 U	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W123127	3749	3871	01/18/07	0.01 U	mg/L	0.0088 J	µg/L	0.044	µg/L	9.56	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W123127	3749	3871	01/18/07			0.02 U	µg/L	0.051	µg/L	8.89	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W148152	4511	4633	01/18/07	0.01 U	mg/L	0.02 U	µg/L	0.033	µg/L	1.05	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W148152	4511	4633	01/18/07			0.02 U	µg/L	0.015 J	µg/L	1.21	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W2327	701	823	01/17/07	0.01 U	mg/L	0.02 U	µg/L	0.19 T	µg/L	5.01 T	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W2327	701	823	01/17/07			0.022 UT	µg/L	0.25 T	µg/L	4.46 T	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W46	121.9	182.9	01/15/07	0.01 UT	mg/L	0.0049 JT	µg/L	350	µg/L	5.22	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W46	121.9	182.9	01/15/07			0.0093 J	µg/L	910	µg/L	7.99	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W4852	1463	1585	01/17/07	0.01 U	mg/L	110	µg/L	0.092 T	µg/L	6.29 T	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W4852	1463	1585	01/17/07			0.021 UT	µg/L	0.089 T	µg/L	6.24 T	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W7377	2225	2347	01/17/07	0.01 UT	mg/L	0.022 UT	µg/L	0.054	µg/L	11.2	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W7377	2225	2347	01/17/07			0.02 U	µg/L	0.048	µg/L	10.4	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W911	274.3	335.3	01/15/07	0.01 U	mg/L	0.081 J	µg/L	5300	µg/L	7.59	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W911	274.3	335.3	01/15/07			0.02 U	µg/L	28	µg/L	6.29	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS06W98102	2987	3109	01/18/07	0.01 U	mg/L	4	µg/L	0.54	µg/L	6.66	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS06W98102	2987	3109	01/18/07			0.02 U	µg/L	0.49	µg/L	6.86	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07CW100	3048	3048	10/18/06	0.01 U	mg/L	0.02 U	µg/L	1.3	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07CW100	3048	3048	10/18/06			0.02 U	µg/L	2.4	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W123127	3749	3871	10/18/06	0.01 U	mg/L	3.1	µg/L	0.47	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W123127	3749	3871	10/18/06			0.02 U	µg/L	0.54	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W148152	4511	4633	10/19/06	0.01 U	mg/L	0.072	µg/L	0.16	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W148152	4511	4633	10/19/06			0.02 U	µg/L	0.059	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W170174	5182	5304	10/19/06	0.0063 J	mg/L	0.017 J	µg/L	0.29	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W170174	5182	5304	10/19/06			0.02 U	µg/L	0.25	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W2327	701	823	10/17/06	0.01 U	mg/L	0.0073 J	µg/L	3900	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W2327	701	823	10/17/06			1.3	µg/L	6100	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W46	121.9	182.9	10/16/06	0.01 U	mg/L	330	µg/L	15000	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W46	121.9	182.9	10/16/06			990	µg/L	480	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W4852	1463	1585	10/17/06	0.01 U	mg/L	34	µg/L	200	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W4852	1463	1585	10/17/06			0.034	µg/L	250	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W7377	2225	2347	10/18/06	0.01 U	mg/L	32	µg/L	8.9 T	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W7377	2225	2347	10/18/06			0.021 T	µg/L	9.5 T	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W911	274.3	335.3	10/16/06	0.01 UT	mg/L	0.77 T	µg/L	3000	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W911	274.3	335.3	10/16/06			4.2	µg/L	2800	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS07W98102	2987	3109	10/18/06	0.01 U	mg/L	30	µg/L	0.35	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS07W98102	2987	3109	10/18/06			0.02 U	µg/L	0.28	µg/L		
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS08W100	3048	3048	10/27/06	0.01 U	mg/L	0.27	µg/L	130	µg/L	8.23	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS08W100	3048	3048	10/27/06			0.02 U	µg/L	130	µg/L	8.12	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS08W123127	3749	3871	10/27/06	0.007 J	mg/L	0.014 J	µg/L	0.79	µg/L	1.2	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS08W123127	3749	3871	10/27/06			0.02 U	µg/L	0.92	µg/L	1.32	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS08W148152	4511	4633	10/27/06	0.01 U	mg/L	0.031	µg/L	0.11	µg/L	1.73	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS08W148152	4511	4633	10/27/06			0.022 U	µg/L	0.15	µg/L	3.08	µg/L
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS08W2327	701	823	10/25/06	0.01 U	mg/L						

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Amenable Cyanide		Benzo(a)pyrene		Naphthalene		Arsenic	
								TZW)	TZW)	Concentration	Units	Concentration	Units	Concentration	Units
Variable Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS08W98102	2987	3109	10/27/06			0.02 U	µg/L	180	µg/L	8.76	µg/L
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09CW100	3048	3048	10/11/06	0.01 U	mg/L	0.025	µg/L	54	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09CW100	3048	3048	10/11/06			0.02 U	µg/L	66	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W123127	3749	3871	10/12/06	0.01 U	mg/L	0.19	µg/L	16	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W123127	3749	3871	10/12/06			0.02 U	µg/L	21	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W148152	4511	4633	10/12/06	0.01 U	mg/L	0.03	µg/L	4.4	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W148152	4511	4633	10/12/06			0.02 U	µg/L	5.9	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W173177	5273	5395	10/13/06	0.01 U	mg/L	0.0076 J	µg/L	5	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W173177	5273	5395	10/13/06			0.02 U	µg/L	7.7	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W2327	701	823	10/09/06	0.01 U	mg/L	0.035	µg/L	44	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W2327	701	823	10/09/06			0.035	µg/L	44	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W46	121.9	182.9	10/05/06	0.01 U	mg/L	0.5	µg/L	0.51	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W46	121.9	182.9	10/05/06			0.39	µg/L	1.8	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W4852	1463	1585	10/10/06	0.01 U	mg/L	6.4	µg/L	13	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W4852	1463	1585	10/10/06			0.005 J	µg/L	14	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W7377	2225	2347	10/10/06	0.0065 J	mg/L	0.013 J	µg/L	880	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W7377	2225	2347	10/10/06			0.023	µg/L	920	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W911	274.3	335.3	10/05/06	0.01 U	mg/L	0.02 U	µg/L	740	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W911	274.3	335.3	10/05/06			4.2	µg/L	1000	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS09W98102	2987	3109	10/11/06	0.01 U	mg/L	64	µg/L	39	µg/L		
Low-To-No Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS09W98102	2987	3109	10/11/06			0.02 U	µg/L	86	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W123127	3749	3871	01/03/07	0.01 U	mg/L	0.088	µg/L	0.4	µg/L	6.9	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W123127	3749	3871	01/03/07			0.023 U	µg/L	0.55	µg/L	6.8	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W148152	4511	4633	01/03/07	0.01 U	mg/L	0.023	µg/L	0.23	µg/L	2.1	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W148152	4511	4633	01/03/07			0.024	µg/L	0.24	µg/L	3.3	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W2327	701	823	01/02/07	0.01 U	mg/L	0.0068 J	µg/L	56	µg/L	9.4	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W2327	701	823	01/02/07			0.023 U	µg/L	63	µg/L	13.2	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W46	121.9	182.9	01/02/07	0.01 U	mg/L	0.99	µg/L	400	µg/L	9.2	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W46	121.9	182.9	01/02/07			0.71	µg/L	400	µg/L	10.1	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W4852	1463	1585	01/02/07	0.01 U	mg/L	31	µg/L	8.7	µg/L	4.5	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W4852	1463	1585	01/02/07			0.023 U	µg/L	9.1	µg/L	4.5	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W7377	2225	2347	01/03/07	0.01 U	mg/L	0.48	µg/L	2.6	µg/L	8.8	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W7377	2225	2347	01/03/07			0.02 U	µg/L	3.6	µg/L	8.6	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W911	274.3	335.3	01/02/07	0.01 U	mg/L	0.21	µg/L	5800	µg/L	6.1	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W911	274.3	335.3	01/02/07			2.2	µg/L	16000	µg/L	20	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS10W98102	2987	3109	01/03/07	0.01 U	mg/L	760	µg/L	9.7	µg/L	7.5	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS10W98102	2987	3109	01/03/07			0.02 U	µg/L	11	µg/L	7.5	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS11W123127	3749	3871	01/08/07	0.01 U	mg/L	0.077	µg/L	0.0084 J	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS11W123127	3749	3871	01/08/07			0.021 U	µg/L	0.0071 J	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS11W148152	4511	4633	01/08/07	0.01 U	mg/L	0.02 U	µg/L	0.059	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS11W148152	4511	4633	01/08/07			0.022 U	µg/L	0.07	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS11W173177	5151	5273	01/08/07	0.01 U	mg/L	0.025 U	µg/L	0.03	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS11W173177	5151	5273	01/08/07			0.02 U	µg/L	0.025	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS11W2327	701	823	01/05/07	0.01 U	mg/L	0.02 U	µg/L	0.055	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS11W2327	701	823	01/05/07			0.0081 J	µg/L	0.024	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS11W46	121.9	182.9	01/04/07								

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Amenable Cyanide		Benzo(a)pyrene		Naphthalene		Arsenic	
								TZW)	TZW)	Concentration	Units	Concentration	Units	Concentration	Units
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W123127	3749	3871	01/11/07	0.01 U	mg/L	0.02 U	µg/L	0.38	µg/L	2.48	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W123127	3749	3871	01/11/07	0.01 U	mg/L	0.02 U	µg/L	0.02 U	µg/L	2.57	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W148152	4511	4633	01/11/07	0.01 U	mg/L	0.02 U	µg/L	0.85	µg/L	0.41	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W148152	4511	4633	01/11/07	0.02 U	µg/L	0.02 U	µg/L	0.02 U	µg/L	0.51	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W2327	701	823	01/10/07	0.01 U	mg/L	0.02 U	µg/L	0.02 UT	µg/L	5.09 T	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W2327	701	823	01/10/07	0.02 UT	µg/L	0.02 UT	µg/L	4.89 T	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W46	121.9	182.9	01/10/07	0.01 UT	mg/L	0.013 JT	µg/L	0.71	µg/L	5.3	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W46	121.9	182.9	01/10/07	0.13	µg/L	7.2	µg/L	8.81	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W4852	1463	1585	01/10/07	0.01 U	mg/L	51	µg/L	0.02 U	µg/L	7.02	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W4852	1463	1585	01/10/07	0.02 U	µg/L	0.045	µg/L	6.23	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W7377	2225	2347	01/10/07	0.01 U	mg/L	0.02 U	µg/L	0.02 UT	µg/L	6.94 T	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W7377	2225	2347	01/10/07	0.02 UT	µg/L	0.02 UT	µg/L	6.95 T	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W911	274.3	335.3	01/10/07	0.01 UT	mg/L	0.02 UT	µg/L	0.05	µg/L	10.4	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W911	274.3	335.3	01/10/07	0.025 U	µg/L	0.13	µg/L	11.2	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	filtered	WLCGSJ06GS12W98102	2987	3109	01/11/07	0.01 U	mg/L	0.52	µg/L	0.26	µg/L	3.78	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Geoprobe	unfiltered	WLCGSJ06GS12W98102	2987	3109	01/11/07	0.021 U	µg/L	0.021 U	µg/L	4.83	µg/L		
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-B016	0	15	07/27/04			10000	µg/kg	590	µg/kg	2.49 T	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-C269-A	0	30	10/28/04								
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-C525-A	0	30	10/26/05			85000	µg/kg	3200	µg/kg	6.96	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G256	0	27	08/19/04			220	µg/kg	17	µg/kg	3.24 JT	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G258	0	27	08/19/04			1200	µg/kg	140	µg/kg	2.96 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G259	0	28	08/12/04			21000	µg/kg	1700	µg/kg	8.12 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G263	0	25	08/30/04			4700	µg/kg	13000	µg/kg	6.52 T	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G264	0	30	08/30/04			140000	µg/kg	22000	µg/kg	4.94	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G265	0	24	08/19/04			1700	µg/kg	120	µg/kg	1.9 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G269	0	26	08/30/04			17000	µg/kg	2300	µg/kg	4.77	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G270-1	0	29	07/21/04			17000	µg/kg	3200	µg/kg	4.46 J	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G270-2	0	29	07/21/04			32000	µg/kg	3900	µg/kg	3.82 J	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G272	0	27	08/19/04			200	µg/kg	41	µg/kg	3.07 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G273	0	28	10/07/04			12000	µg/kg	860	µg/kg	2.67 J	mg/kg
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-G274	0	22	10/29/04			17000	µg/kg	1200	µg/kg	2.78	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G276	0	29	08/30/04			4100	µg/kg	510	µg/kg	4.4	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G278	0	27	08/30/04			27000	µg/kg	3400	µg/kg	4.55	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G281	0	28	08/19/04			85	µg/kg	3.8	µg/kg	3.28	mg/kg
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-G283	0	27	08/30/04			140000	µg/kg	38000	µg/kg	4.02	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G284	0	27	08/30/04			3700	µg/kg	290	µg/kg	4.73	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G288	0	30	09/13/04			100000	µg/kg	230000	µg/kg	3.28 J	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G289	0	27	08/19/04			17000	µg/kg	1600	µg/kg	3.7 J	mg/kg
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-G292	0	28	09/13/04			31000	µg/kg	2100	µg/kg	2.85 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G294-1	0	26	07/21/04			42000	µg/kg	73000	µg/kg	3.49 JT	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G294-2	0	29	07/21/04			51500 T	µg/kg	13000 T	µg/kg	3.22 JT	mg/kg
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-G298	0	27	09/13/04			220000	µg/kg	1500000	µg/kg	2.23 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G301	0	27	09/13/04			47000	µg/kg	2300	µg/kg	3.05 J	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G521	0	28	09/13/04			4600	µg/kg	520	µg/kg	3.77 J	mg/kg
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LWG0106B025SDS015C00	0	15	10/14/02			41000 T	µg/kg	7000	µg/kg	2.3	mg/kg
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-GS4A	0	26	12/01/05			85000	µg/kg	15000	µg/kg	3.02	mg/kg
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-GS4A-2	0	26	12/01/05			160000	µg/kg	55000	µg/kg	3.11	mg/kg
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-GS7B	0	24	12/01/05			43000	µg/kg	3800	µg/kg	4.59	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-GS7D	0	30	1								

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Sample Date	Amenable Cyanide		Benzo(a)pyrene		Naphthalene		Arsenic	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCGSD01AN0105_00-10	0	10	04/10/01			150	µg/kg	130 J	µg/kg	4.1	mg/kg
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	WLCGSD01AN0201_00-10	0	10	04/11/01			3000 J	µg/kg	15000	µg/kg	3.5	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGSD01AN0202_00-10	0	10	04/11/01			23000	µg/kg	14000	µg/kg	3.4	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGSD01AN0203_00-10	0	10	04/11/01			39000	µg/kg	180000	µg/kg	4.3	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGSD01AN0204_00-10	0	10	04/11/01			31000	µg/kg	14000	µg/kg	4.4	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCGSD01AN0205_00-10	0	10	04/11/01			270	µg/kg	24	µg/kg	3	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSB2S02	0	60.96	09/21/07			18000	µg/kg	2600 J	µg/kg	3.2	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSB5S02	0	60.96	09/21/07			37000	µg/kg	1200000 J	µg/kg	2.6	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSB7S02	0	60.96	08/30/07			7800	µg/kg	4000	µg/kg	3.18	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSC5S02	0	60.96	09/20/07			110	µg/kg	13 J	µg/kg	1.8	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSC7S02	0	60.96	09/19/07			100000	µg/kg	1200000 J	µg/kg	2	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSD2S02	0	60.96	09/20/07			28	µg/kg	22	µg/kg	2.4	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCGSG07GSD4S02	0	60.96	09/20/07			5.2	µg/kg	0.2 U	µg/kg	2.8	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCT0198GRAB04GRAB04	0	10	09/14/98			1500 J	µg/kg	160 J	µg/kg	1.8	mg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	WLR0797WRBC22WRBC22	0	23	07/25/97			99000 J	µg/kg	5300 J	µg/kg	3.3	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0620	0	10	09/20/97			57000	µg/kg	1900	µg/kg	5 U	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0630	0	10	09/20/97			5100	µg/kg	1200	µg/kg	5 U	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0640	0	10	09/20/97			40000	µg/kg	130000	µg/kg	6 U	mg/kg
Variable Nearshore Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0650	0	10	09/20/97			23000	µg/kg	20000	µg/kg	5 U	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0670	0	10	09/21/97			15000	µg/kg	13000	µg/kg	5 U	mg/kg
Low-To-No Groundwater Discharge Zone	TZW	Peep	--	LWG2-P-GSC1B	0	38	11/29/05			250	µg/L	0.55 J	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Peep	--	LWG2-P-GSC7D	0	38	11/29/05			0.082	µg/L	4.4	µg/L	7.59	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	unfiltered	LWG2-T30-GS2A	30	30	10/25/05			1100	µg/L	1.6 J	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Trident	filtered	LWG2-T30-GS2A-FILT	30	30	10/25/05			3	µg/L	1100	µg/L	1.2 J	µg/L
Variable Nearshore Groundwater Discharge Zone	TZW	Trident	unfiltered	LWG2-T30-GS7B	30	30	10/25/05			0.075	µg/L	3100	µg/L	5.7	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	unfiltered	LWG2-T30-GS8A	30	30	10/24/05			2.7	µg/L	0.11 U	µg/L	17.2 T	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	filtered	LWG2-T30-GS8A-FILT	30	30	10/24/05			0.077	µg/L	0.11 U	µg/L	16.8	µg/L
Offshore Groundwater Discharge Zone	TZW	Trident	unfiltered	LWG2-T30-GS8D	30	30	10/24/05			0.002 U	µg/L	6.5	µg/L	2.7	µg/L
Offshore Groundwater Discharge Zone	TZW	Trident	filtered	LWG2-T30-GS8D-FILT	30	30	10/24/05			0.11	µg/L	3.5	µg/L	1.9	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	unfiltered	LWG2-T90-GS7D	150	150	10/25/05			3.6	µg/L				
Offshore Groundwater Discharge Zone	TZW	Trident	unfiltered	LWG2-T90-GS8D	150	150	10/24/05			14	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Geop	filtered	WLCGSG07GSB1A	27.43	57.91	07/17/07			0.005 J	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG07GSB1A	27.43	57.91	07/17/07			0.006 J	mg/L	2.3	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geop	filtered	WLCGSG07GSB2A1	45.72	76.2	07/17/07			0.23	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG07GSB2A1	45.72	76.2	07/17/07			120	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG07GSB3A	30.48	60.96	07/19/07			0.02 J	µg/L	1.6	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geop	filtered	WLCGSG07GSB4A	30.48	60.96	07/19/07			0.005 UJ	µg/L	0.0054 J	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG07GSB4A	30.48	60.96	07/19/07			6	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Geop	filtered	WLCGSG07GSB5A	48.77	79.25	07/18/07			0.005 UJ	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG07GSB5A	48.77	79.25	07/18/07			1800	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG07GSB6A	30.48	60.96	07/06/07			0.047	µg/L	8.5	µg/L	13.4 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG07GSB7A	30.48	60.96	07/05/07			0.13	µg/L	0.45	µg/L	16.8 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG07GSB7PWE071004	(blank)	45	10/04/07			46	µg/L	7.2	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG07GSB7PWE071005	(blank)	45	10/05/07			15 J	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG07GSB7PWSH071005	(blank)	45	10/05/07			19	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG07GSB7PWSL071005	(blank)	45	10/05/07			10	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG07GSB7PWSL071006	(blank)	45	10/06/07			17	µg/L				
Offshore Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG07GSB8A	30.48	60.96	07/09/07			0.005 U	mg/L	1.7 J	µg/L	14	µg/L
Offshore Groundwater Discharge Zone	TZW	Geop	unfiltered	WLCGSG											

Table C3.4-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gasco.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and		Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and	Sample Date	Amenable Cyanide		Benzo(a)pyrene		Naphthalene		Arsenic	
					TZW)	TZW)			Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7A	30.48	60.96	07/11/07	0.003 U	mg/L	0.029	µg/L	85	µg/L	3.09	µg/L	
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWE071004	(blank)	45	10/04/07	0.005 U	mg/L	0.0048 J	µg/L	19000	µg/L			
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWE071005	(blank)	45	10/05/07	0.005 U	mg/L	18	µg/L	17000	µg/L			
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWSH071004	(blank)	45	10/04/07	0.005 U	mg/L	13	µg/L	15000	µg/L			
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWSH071005	(blank)	45	10/05/07	0.005 U	mg/L	14	µg/L	17000 J	µg/L			
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWSL071004	(blank)	45	10/04/07	0.005 U	mg/L	66	µg/L	15000	µg/L			
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWSL071005	(blank)	45	10/05/07	0.005 U	mg/L	75	µg/L	19000	µg/L			
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC7PWSL071006	(blank)	45	10/06/07	0.005 U	mg/L	20	µg/L	17000	µg/L			
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC8A	36.58	67.06	07/11/07	0.005 U	mg/L	4.1	µg/L	8 J	µg/L	6.51	µg/L	
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSC9A	30.48	60.96	07/10/07	0.005 U	mg/L	0.087	µg/L	0.088	µg/L	27.8	µg/L	
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD1A	30.48	60.96	07/20/07	0.005 UT	mg/L	0.0052 JT	µg/L	0.77	µg/L	22.1	µg/L	
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD2A	30.48	60.96	07/20/07	0.005 U	mg/L	0.65	µg/L	0.012 J	µg/L	18.5	µg/L	
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD3A	15.24	45.72	07/23/07	0.005 U	mg/L	0.044 UJ	µg/L	0.003 U	µg/L	65.4 J	µg/L	
Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD4A	30.48	60.96	07/23/07	0.005 UJ	mg/L			0.68 J	µg/L	45.5 J	µg/L	
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5A	30.48	60.96	07/24/07	0.005 U	mg/L	0.36	µg/L	0.13	µg/L	38.6 J	µg/L	
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5PWE071004	(blank)	45	10/04/07	0.005 UJ	mg/L	0.041 J	µg/L	0.003 U	µg/L			
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5PWE071005	(blank)	45	10/05/07	0.005 U	mg/L	0.0087 J	µg/L	0.003 U	µg/L			
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5PWSH071004	(blank)	45	10/04/07	0.005 U	mg/L	0.0043 U	µg/L	0.11	µg/L			
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5PWSH071005	(blank)	45	10/05/07	0.005 U	mg/L	0.0043 U	µg/L	0.003 U	µg/L			
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5PWSL071005	(blank)	45	10/05/07	0.005 U	mg/L	0.0043 U	µg/L	0.003 U	µg/L			
Far Offshore Groundwater Discharge Zone	TZW	Geoprobe	unfiltered	WLCGSG07GSD5PWSL071006	(blank)	45	10/06/07	0.005 U	mg/L	0.0043 U	µg/L	0.068	µg/L			

Notes:

-- Indicates no data are available

BTEX - benzene, toluene, ethylbenzene, and xylenes

COI - contaminant of interest

GW - groundwater

TZW - transition zone water

Reason codes for qualifiers:

J - The associated numerical value is an estimated quantity.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:

T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in

preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table C3.5-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Siltronic.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Sample Date	BTEX		cis-1,2-Dichloroethene		TCE		Vinyl chloride		Arsenic	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
--	Upland GW	--	Total	GP02-01	58	--	03/20/02	ND	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	GP02-02	25	--	03/21/02	5112.2	µg/L	57900	µg/L	575000	µg/L	25.4	µg/L	--	
--	Upland GW	--	Total	GP02-02	58	--	03/21/02										
--	Upland GW	--	Total	GP02-02	98	--	03/21/02										
--	Upland GW	--	Total	GP02-03	58	--	03/22/02	2.94	µg/L	101	µg/L	33.4	µg/L	204	µg/L	--	
--	Upland GW	--	Total	GP10	24	--	07/16/03	2090	µg/L	3590	µg/L	8	µg/L	8.75	µg/L	--	
--	Upland GW	--	Total	GP11	96	--	07/15/03	0.41	µg/L	ND	µg/L	0.62	µg/L	0.46	µg/L	--	
--	Upland GW	--	Total	GP12	17	--	06/29/04	5.97	µg/L	1.38	µg/L	0.44	µg/L	1.02	µg/L	--	
--	Upland GW	--	Total	GP13	17	--	06/29/04	3.31	µg/L	0.78	µg/L	0.41	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	GP14	17	--	06/30/04	61.48	µg/L	0.51	µg/L	0.75	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	GP15	17	--	06/29/04	139.52	µg/L	0.55	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	GP16	22	--	06/29/04	182.79	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	GP17	17	--	06/29/04	2758	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	GP18	22	--	06/30/04	585.7	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	GP19	17	--	06/30/04	4130.8	µg/L	1.34	µg/L	0.78	µg/L	0.6	µg/L	--	
--	Upland GW	--	Total	GP20	28	--	07/19/04	1987.2	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	GP21	28	--	07/19/04	3511.6	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	GP22	28	--	07/19/04	8730	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	GP23	28	--	07/19/04	3125	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	GP24	28	--	07/19/04	26693	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	GP25	128.3	--	10/01/04	94.79	µg/L							--	
--	Upland GW	--	Total	GP4	98	--	09/30/02	89.03	µg/L	21	µg/L	0.6	µg/L	9.1	µg/L	--	
--	Upland GW	--	Total	GP5	95	--	10/08/02	210	µg/L	12000	µg/L	12000	µg/L	2000	µg/L	--	
--	Upland GW	--	Total	GP6	98	--	10/01/02	220	µg/L	16000	µg/L	2500	µg/L	2700	µg/L	--	
--	Upland GW	--	Total	GP7	68	--	10/04/02					1000	µg/L				
--	Upland GW	--	Total	GP7	98	--	10/04/02	38	µg/L	23000	µg/L			6300	µg/L	--	
--	Upland GW	--	Total	GP8	24	--	07/16/03	2834.1	µg/L	1330	µg/L	616	µg/L	4.44	µg/L	--	
--	Upland GW	--	Total	GP9	24	--	07/17/03	1584.3	µg/L	6360	µg/L	273	µg/L	9.23	µg/L	5 U	
--	Upland GW	--	Total	P-1A	26	--	03/18/02	ND	µg/L								
--	Upland GW	--	Total	P-1A	56	--	03/18/02										
--	Upland GW	--	Total	P-2	30	--										24	
--	Upland GW	--	Total	P-2	98	--	08/16/01	164.4	µg/L	6780	µg/L	11200	µg/L	720	µg/L	--	
--	Upland GW	--	Total	P-3	30.5	--	08/21/01	156.2	µg/L							16	
--	Upland GW	--	Total	P-3	57	--	08/21/01										
--	Upland GW	--	Total	P-4	30	--	08/15/01	12	µg/L	312	µg/L	ND	µg/L	212	µg/L	8	
--	Upland GW	--	Total	P-4	52	--	08/15/01										
--	Upland GW	--	Total	P-5	31	--	08/15/01	ND	µg/L	453	µg/L	33.3	µg/L	29.6	µg/L	--	
--	Upland GW	--	Total	P-5	54	--	08/15/01										
--	Upland GW	--	Total	P-5	98	--										34	
--	Upland GW	--	Total	P-6	34	--	08/02/01	ND	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	5 U	
--	Upland GW	--	Total	P-7	59	--	08/09/01	ND	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	5 U	
--	Upland GW	--	Total	P-8	30	--										19	
--	Upland GW	--	Total	P-8	82	--	08/09/01	11.1	µg/L	ND	µg/L	ND	µg/L	21.1	µg/L	--	
--	Upland GW	--	Total	P-9	33	--	08/16/01	ND	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	30	
--	Upland GW	--	Total	WS-10-27	27	--	11/16/04	8438	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	WS-11	117	--	09/25/03	466.3	µg/L	17200	µg/L	2900	µg/L	3200	µg/L	--	
--	Upland GW	--	Total	WS-11-125	118	--	11/16/04	1099	µg/L	10500	µg/L	484	µg/L	1150	µg/L	--	
--	Upland GW	--	Total	WS-11-161	152.5	--	11/16/04	ND	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	WS-12	205	--	09/17/03	ND	µg/L	ND	µg/L	2.05	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	WS-12-125	120	--	11/17/04	4.01	µg/L	ND	µg/L	ND	µg/L	4.58	µg/L	--	
--	Upland GW	--	Total	WS-12-161	156	--	11/17/04	612.8	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	WS-13	87	--	10/06/03	191.6	µg/L	559	µg/L	43200	µg/L	10.1	µg/L	--	
--	Upland GW	--	Total	WS-13-105	96.5	--	11/18/04	19.09	µg/L								
--	Upland GW	--	Total	WS-13-105	100	--	11/18/04										
--	Upland GW	--	Total	WS-13-69	64	--	11/18/04	1172.3	µg/L	20900	µg/L	1					

Table C3.5-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Siltronic.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Sample Date	BTEX		cis-1,2-Dichloroethene		TCE		Vinyl chloride		Arsenic	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
--	Upland GW	--	Total	WS-14	101	--	06/25/04			12.9	µg/L	ND	µg/L	29.2	µg/L	--	
--	Upland GW	--	Total	WS-14-125	118	--	11/16/04	5229	µg/L	8.54	µg/L	ND	µg/L	4.09	µg/L	--	
--	Upland GW	--	Total	WS-14-161	156	--	11/16/04	0.43	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	WS-15	80	--	07/15/04	185.5	µg/L	3780	µg/L	243000	µg/L	10	µg/L	--	
--	Upland GW	--	Total	WS-15-140	135	--	11/18/04	9.1	µg/L	7.12	µg/L	2.62	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	WS-15-85	80	--	11/18/04	4500	µg/L	2640	µg/L	186	µg/L	4.42	µg/L	--	
--	Upland GW	--	Total	WS-16	90	--	08/02/04	3274	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	WS-16-125	120	--	11/17/04	ND	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	WS-16-161	156	--	11/17/04	5.24	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	WS-17	46	--	08/09/04	35.93	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	WS-17-52	45	--	11/16/04	297.5	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	WS-17-94	89	--	11/17/04	31.89	µg/L	ND	µg/L	0.81	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	WS-8	28	--	07/10/02	89.23	µg/L							--	
--	Upland GW	--	Total	WS-8	56	--	07/10/02			117	µg/L	1.19	µg/L	160	µg/L	--	
--	Upland GW	--	Total	WS-9	29	--	07/10/02	ND	µg/L	ND	µg/L	ND	µg/L	ND	µg/L	--	
--	Upland GW	--	Total	MW-03-81		04/14/05									3.45		
--	Upland GW	--	Total	MW-03-I		04/14/05									2.71		
--	Upland GW	--	Total	SIL-01-31.5	31.5		11/01/05								14.4		
--	Upland GW	--	Total	SIL-02-32	32		11/16/05								10.4		
--	Upland GW	--	Total	SIL-03-130	130		12/06/05								4.7 U		
--	Upland GW	--	Total	SIL-04-30	30		11/16/05								4.7 U		
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP25	155.3		10/01/04			5680	µg/L	952	µg/L	1010	µg/L	--	
Low-To-No Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP26	109.3	--	10/06/04	513.1	µg/L	284	µg/L	243	µg/L	94	µg/L	--	
Low-To-No Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP26	177.3	--	10/06/04			3620	µg/L	605	µg/L	341	µg/L	--	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP27	73.3	--	10/12/04	463.86	µg/L							--	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP27	181.3	--	10/12/04			668	µg/L	0.64	µg/L	109	µg/L	--	
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP28	110.3	--	10/15/04			11200	µg/L			6390	µg/L	--	
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP28	125.3	--	10/15/04	111.03	µg/L							--	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP29	79.8		10/21/04	895.7	µg/L							--	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP29	145.8		10/21/04									--	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP29	165.3		10/21/04									--	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP30	97	--	10/25/04									--	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP30	122	--	10/25/04	133.63	µg/L	16600	µg/L	101	µg/L			--	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP31	99.8	--	10/27/04	83.69	µg/L							--	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP31	166.8	--	10/27/04			210	µg/L	30.7	µg/L	22	µg/L	--	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP32	80.3	--	10/29/04	118.39	µg/L	8490	µg/L					--	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Total	GP32	124.3		10/29/04					7.58	µg/L	726	µg/L	--	
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP33W112	3414	3414	04/28/05	0.8 T	µg/L	4.74	µg/L	0.2 U	µg/L	0.61	µg/L	--	
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP33W152	4633	4633	04/28/05	0.43 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	3.48 T	mg/kg
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP33W203	6187	6187	04/27/05	0.72 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	3.74	mg/kg
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP33W38	1158	1158	04/28/05	2.1 T	µg/L	1.28	µg/L	0.2 U	µg/L	0.2 U	µg/L	3.26 J	mg/kg
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP33W60	1829	1829	04/28/05	0.75 T	µg/L	54.3	µg/L	12.7	µg/L	2.81	µg/L	3.06	mg/kg
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP33W92	2804	2804	04/28/05	0.22 T	µg/L	1.88	µg/L	0.2 U	µg/L	0.64	µg/L	3.97	mg/kg
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP34W28	853	853	04/28/05	0.4 UT	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	3.69 J	mg/kg
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP35W28	853	853	04/28/05	40 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	3.96	mg/kg
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP36W110	3353	3353	05/04/05	0.4 UT	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.239	J mg/kg		
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP36W150	4572	4572	05/04/05	0.4 UT	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	4.28	mg/kg
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP36W207	6309	6309	05/04/05	0.61 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	3.76 JT	mg/kg
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP36W38	1158	1158	05/03/05	0.4 UT	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	2.8 J	mg/kg
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP36W60	1829	182											

Table C3.5-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Siltronic.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	BTEX		cis-1,2-Dichloroethene		TCE		Vinyl chloride		Arsenic	
							Sample Date	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units	
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP37W92	2804	2804	05/05/05	0.23 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	2.15 mg/kg
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP49W20	609.6	609.6	05/12/05	0.4 UT	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	4.44 mg/kg
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP49W37	1128	1128	05/12/05	1 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	5 U mg/kg
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP49W52	1585	1585	05/12/05	1.2 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	9 U mg/kg
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP49W67	2042	2042	05/12/05	1.3 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	11 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP49W87	2652	2652	05/12/05	0.95 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	12.5 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP55W5	152.4	152.4	05/16/05	8.4 T	µg/L	267	µg/L	4.51	µg/L	484	µg/L	4.67 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP61W5	152.4	152.4	05/18/05	18 T	µg/L	2960	µg/L	1.85	µg/L	863	µg/L	10 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP62W5	152.4	152.4	05/18/05	8.4 T	µg/L	1.25	µg/L	0.2 U	µg/L	0.39	µg/L	11.1 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP63W5	152.4	152.4	05/19/05	7.5 T	µg/L	106	µg/L	0.91	µg/L	89.3	µg/L	5.76 T µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP64W5	152.4	152.4	05/19/05	290 T	µg/L	10900	µg/L	19500	µg/L	98.3	µg/L	12.6 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP66W113	396.2	396.2	05/20/05	1.2 T	µg/L	9.54	µg/L	0.87 U	µg/L	6.16	µg/L	14.3 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP66W12	365.8	365.8	05/20/05	20 T	µg/L	552	µg/L	1.93 U	µg/L	567	µg/L	15.1 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP66W27	823	823	05/20/05	5.9 T	µg/L	252	µg/L	2.87 U	µg/L	100	µg/L	14.9 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP66W52	1585	1585	05/20/05	13 T	µg/L	342	µg/L	1.49 U	µg/L	207	µg/L	5.19 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP66W77	2347	2347	05/20/05	20 T	µg/L	194	µg/L	5.53	µg/L	205	µg/L	5.25 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP68W5	152.4	152.4	05/23/05	18 T	µg/L	0.2 U	µg/L	1.32	µg/L	0.76	µg/L	5.12 T µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP69W5	152.4	152.4	05/24/05	160 T	µg/L	92.8	µg/L	2.67	µg/L	18	µg/L	4.56 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP70W5	152.4	152.4	05/24/05	5.9 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	1.43	µg/L	15 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP72W25	762	762	05/25/05	0.4 UT	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	14.8 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP72W44	1341	1341	05/25/05	0.29 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	9.75 µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP73W5	152.4	152.4	05/25/05	44 T	µg/L	1.46	µg/L	0.2 U	µg/L	0.99	µg/L	8.62 µg/L
Far Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP74W23	701	701	05/26/05	3.5 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.4	µg/L	7.04 µg/L
Far Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP74W5	152.4	152.4	05/26/05	1100 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.35	µg/L	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP75W5	152.4	152.4	05/26/05	1.1 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	1.01	µg/L	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP76W5	152.4	152.4	05/27/05	2900 T	µg/L	36.8	µg/L	1.75	µg/L	2.41	µg/L	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP80W12	365.8	365.8	05/31/05	130 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U µg/L
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP80W22	670.6	670.6	05/31/05	0.3 T	µg/L	29.2	µg/L	0.2 U	µg/L	3.1	µg/L	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP80W32	975.4	975.4	05/31/05	1.8 T	µg/L	29.7	µg/L	0.2 U	µg/L	2.81	µg/L	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP81W5	152.4	152.4	05/31/05	6800 T	µg/L	0.2 U	µg/L	1.04	µg/L	0.84	µg/L	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP82W5	152.4	152.4	06/01/05	67 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP83W12	365.8	365.8	06/01/05	4200 T	µg/L	3610	µg/L	98.5	µg/L	593	µg/L	
Offshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01GP83W5	152.4	152.4	06/01/05	170 T	µg/L	4720 T	µg/L	1.9 T	µg/L	1600 T	µg/L	
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS1125_0104	3551	3551	01/30/04	650 T	µg/L	3740	µg/L	1100	µg/L	936	µg/L	
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS1125_0205	3597	3597	02/16/05	5700 T	µg/L	21000	µg/L	8640	µg/L	2130	µg/L	
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS1125_0404	3551	3551	04/29/04	830 T	µg/L	7020	µg/L	1120	µg/L	1010	µg/L	
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS1125_0505	3597	3597	05/18/05	770 T	µg/L	14200	µg/L	61.7	µg/L	2660	µg/L	
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS1125_1104	3597	3597	11/16/04	1100 T	µg/L	10500	µg/L	484	µg/L	1150	µg/L	
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS1161_0104	4648	4648	01/29/04	0.4 UT	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS1161_0205	4755	4755	02/16/05	0.4 UT	µg/L	1.22	µg/L	0.2 U	µg/L	0.2 U	µg/L	
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS1161_0404	4648	4648	04/27/04	0.4 UT	µg/L	0.78	µg/L	0.64				

Table C3.5-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Siltronic.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	BTEX		cis-1,2-Dichloroethene		TCE		Vinyl chloride		Arsenic		
							Sample Date	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units		
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14125_0505	3597	3597	05/23/05	4500 T	µg/L	11.4	µg/L	0.2 U	µg/L	2.77	µg/L	20 U	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14125_1104	3597	3597	11/16/04	5200 T	µg/L	8.54	µg/L	0.2 U	µg/L	4.09	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14161_0205	4755	4755	02/21/05	2.5 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	20 U	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14161_0505	4755	4755	05/23/05	0.34 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14161_1104	4755	4755	11/16/04	0.43 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14W101	3078	3078	06/25/04	10000 T	µg/L	12.9	µg/L	0.2 U	µg/L	29.2	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14W120	3658	3658	06/26/04	90 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14W135	4115	4115	06/26/04	74 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14W142	4328	4328	06/26/04	4000 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14W150	4572	4572	06/28/04	3.1 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	20 U	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14W167	5090	5090	06/29/04	7.1 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14W182	5547	5547	06/29/04	0.4 UT	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	20 U	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14W197	6005	6005	07/06/04	0.89 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14W208	6340	6340	07/06/04	0.4 UT	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L	20 U	µg/L
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14W71	2164	2164	06/24/04	630 T	µg/L	1.76	µg/L	0.2 U	µg/L	0.36	µg/L		
Nearshore Groundwater Discharge Zone	In-River GW	Pushprobe	Unfiltered	WLCSLH01WS14W86	2621	2621	06/25/04	11000 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-C299-A	0	30	09/22/04										
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-C301-A	0	30	11/08/04										
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-C312-A	0	30	10/19/05	0.26 JT	µg/kg			0.13 U	µg/kg	0.57 J	µg/kg	20 U	µg/L
Far Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G287	0	28	08/19/04	0.23 JT	µg/kg			0.099 U	µg/kg	0.14 U	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G297	0	27	08/19/04	0.37 JT	µg/kg			0.13 U	µg/kg	0.18 U	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G299	0	26	08/19/04	16.5 JT	µg/kg			0.14 U	µg/kg	0.19 U	µg/kg	20 U	µg/L
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G302	0	27	09/13/04	39.43 JT	µg/kg			0.13 U	µg/kg	0.17 U	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G305	0	28	08/19/04	0.83 JT	µg/kg			0.15 U	µg/kg	0.2 U	µg/kg	20 U	µg/L
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G308	0	27	09/13/04							0.13 U	µg/kg	0.18 U	µg/kg
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-G309	0	26	08/20/04	0.28 JT	µg/kg			0.12 U	µg/kg	0.17 UT	µg/kg	20 U	µg/L
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G311-1	0	21	07/21/04	0.53 JT	µg/kg			0.12 U	µg/kg	0.16 U	µg/kg		
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G311-2	0	22	07/21/04	0.28 UT	µg/kg			0.12 U	µg/kg	0.17 U	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	LW2-GBT015	0	10	12/20/05	0.22 JT	µg/kg	0.18 U	µg/kg	0.18 U	µg/kg	0.24 U	µg/kg	20 U	µg/L
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW3-GCRSP06W	0	18	10/17/07										
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-SL2A	0	29	11/29/05	1.16 JT	µg/kg	0.12 U	µg/kg	0.12 U	µg/kg	0.17 U	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-SL2E	0	21	11/29/05	1.26 JT	µg/kg	0.13 U	µg/kg	0.13 U	µg/kg	0.17 U	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-SL3F	0	30	11/29/05	7.3 JT	µg/kg	0.14 U	µg/kg	0.14 U	µg/kg	0.19 U	µg/kg		
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-SL4A	0	20	11/29/05	0.24 UT	µg/kg	0.096 U	µg/kg	0.096 U	µg/kg	0.14 U	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-SL4F	0	30	11/29/05	1.59 JT	µg/kg	0.12 U	µg/kg	0.12 U	µg/kg	0.17 U	µg/kg		
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-SL5A	0	26	11/29/05	0.25 UT	µg/kg	0.11 U	µg/kg	0.11 U	µg/kg	0.15 U	µg/kg		
Offshore Groundwater Discharge Zone	Sediment	--	--	WLCDRD05PG05454	0	28	05/27/05	0.35 UT	µg/kg			0.15 U	µg/kg	0.2 U	µg/kg		
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0680	0	10	09/21/97										
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0690	0	10	09/20/97										
Offshore Groundwater Discharge Zone	TZW	Peep	--	LWG2-P-SLT1E	0	38	11/15/05	13.8 JT	µg/L	0.63	µg/L	0.14 U	µg/L	1.4	µg/L		
Offshore Groundwater Discharge Zone	TZW	Peep	--	LWG2-P-SLT2C	0	38	11/16/05	1.52 JT	µg/L	0.12 U	µg/L	0.14 U	µg/L	0.042 U	µg/L		
Offshore Groundwater Discharge Zone	TZW	Peep	--	LWG2-P-SLT2E	0	38	11/16/05	9.05 T	µg/L	0.12 U	µg/L	0.14 U	µg/L	0.21 J	µg/L		
Offshore Groundwater Discharge Zone	TZW	Peep	--	LWG2-P-SLT3C	0	38	11/17/05	0.44 JT	µg/L	0.12 U	µg/L	0.14 U	µg/L	0.042 U	µg/L		
Offshore Groundwater Discharge Zone	TZW	Peep	--	LWG2-P-SLT3F	0	38	11/16/05	23.3 T	µg/L	0.12 U	µg/L	0.14 U	µg/L	0.16 J	µg/L		
Offshore Groundwater Discharge Zone	TZW	Peep															

Table C3.5-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Siltronic.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Sample Date	BTEX		cis-1,2-Dichloroethene		TCE		Vinyl chloride		Arsenic	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Nearshore Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-SL4A	90	90	10/08/05	6.61 T	µg/L	0.12 U	µg/L	0.14 U	µg/L	0.09 J	µg/L		
Nearshore Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T90-SL4A-FILT	90	90	10/08/05										
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP38W1	30.48	30.48	05/09/05	21 T	µg/L	2740	µg/L	0.76	µg/L	1090	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP39W1	30.48	30.48	05/10/05	13 T	µg/L	517	µg/L	0.2 U	µg/L	390	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP40W1	30.48	30.48	05/10/05	4.3 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP41W1	30.48	30.48	05/10/05	3.7 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP41W3	91.44	91.44	05/10/05	1.2 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP42W1	30.48	30.48	05/10/05	0.4 UT	µg/L	6.36	µg/L	0.2 U	µg/L	7.92	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP42W3	91.44	91.44	05/10/05	0.4 UT	µg/L	3.55	µg/L	0.2 U	µg/L	3.61	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP43W1	30.48	30.48	05/11/05	1.9 T	µg/L	25.4 T	µg/L	0.2 UT	µg/L	115 T	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP44W1	30.48	30.48	05/11/05	44 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.79	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP45W1	30.48	30.48	05/11/05	11 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Nearshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP46W1	30.48	30.48	05/11/05	14 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP47W1	30.48	30.48	05/11/05	0.4 UT	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP47W3	91.44	91.44	05/11/05	3 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP48W1	30.48	30.48	05/11/05	8.8 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.47	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP49W1	30.48	30.48	05/12/05	0.4 UT	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP50W1	30.48	30.48	05/12/05	1.3 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP51W1	30.48	30.48	05/13/05	1.92 UT	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP51W3	91.44	91.44	05/13/05	2.8 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP52W1	30.48	30.48	05/13/05	1.7 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.48	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP52W3	91.44	91.44	05/13/05	0.41 UT	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.65	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP53W1	30.48	30.48	05/13/05	0.36 T	µg/L	7.24	µg/L	0.2 U	µg/L	8.27	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP53W3	91.44	91.44	05/13/05	0.57 T	µg/L	103	µg/L	0.2 U	µg/L	34.3	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP54W1	30.48	30.48	05/13/05	1200 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP55W1	30.48	30.48	05/16/05	3.2 T	µg/L	1.55	µg/L	0.2 U	µg/L	16	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP55W3	91.44	91.44	05/16/05	7.3 T	µg/L	254	µg/L	4.05	µg/L	422	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP56W1	30.48	30.48	05/16/05	3.3 T	µg/L	1.7	µg/L	0.2 U	µg/L	2.19	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP56W3	91.44	91.44	05/16/05	1.8 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.57	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP57W1	30.48	30.48	05/16/05	3.7 T	µg/L	111	µg/L	0.31	µg/L	139	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP58W1	30.48	30.48	05/16/05	0.93 T	µg/L	27.5	µg/L	0.2 U	µg/L	7.92	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP61W1	30.48	30.48	05/18/05	6.1 T	µg/L	0.2 UT	µg/L	0.2 UT	µg/L	1.9 T	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP61W3	91.44	91.44	05/18/05	17 T	µg/L	62.8	µg/L	0.2 U	µg/L	56.2	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP62W1	30.48	30.48	05/18/05	5.7 T	µg/L	1.66	µg/L	0.2 U	µg/L	0.99	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP62W3	91.44	91.44	05/18/05	14 T	µg/L	4.09	µg/L	0.2 U	µg/L	1.4	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP63W1	30.48	30.48	05/19/05	3.1 T	µg/L	18.2	µg/L	0.2 U	µg/L	114	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP63W3	91.44	91.44	05/19/05	35 T	µg/L	15.3	µg/L	0.2 U	µg/L	125	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP64W1	30.48	30.48	05/19/05	1200 T	µg/L	2950	µg/L	0.62	µg/L	625	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP64W3	91.44	91.44	05/19/05	280 T	µg/L	7600	µg/L	51.5	µg/L	475	µg/L		
Far Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP65W1	30.48	30.48	05/19/05	41 T	µg/L	14400	µg/L	48.7	µg/L	1640	µg/L		
Far Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP65W3	91.44	91.44	05/19/05	39 T	µg/L	19200	µg/L	15.5	µg/L	650	µg/L		
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP66W1	30.48	3											

Table C3.5-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Siltronic.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and		BTEX	cis-1,2-Dichloroethene		TCE		Vinyl chloride		Arsenic	
					TZW)	TZW)		Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP75W1	30.48	30.48	05/26/05	5.4 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.59	µg/L
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP75W3	91.44	91.44	05/26/05	6.2 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.55	µg/L
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP76W1	30.48	30.48	05/27/05	11 T	µg/L	21.5	µg/L	0.8	µg/L	1.69	µg/L
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP76W3	91.44	91.44	05/27/05	460 T	µg/L	570	µg/L	29.2	µg/L	87.7	µg/L
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP80W1	30.48	30.48	05/31/05	4.1 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.2 U	µg/L
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP81W1	30.48	30.48	05/31/05	1200 T	µg/L	2.28 T	µg/L	0.2 U	µg/L	1.57 T	µg/L
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP81W3	91.44	91.44	05/31/05	650 T	µg/L	0.2 U	µg/L	0.71	µg/L	0.76	µg/L
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP82W1	30.48	30.48	06/01/05	170 T	µg/L	3.77	µg/L	0.2 U	µg/L	1.51	µg/L
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP82W3	91.44	91.44	06/01/05	73 T	µg/L	0.2 U	µg/L	0.2 U	µg/L	0.65	µg/L
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP84W1	30.48	30.48	06/01/05	2.7 T	µg/L	2.27	µg/L	5.63	µg/L	0.65	µg/L
Offshore Groundwater Discharge Zone	TZW	Siltronic	Unfiltered	WLCSLH01GP84W3	91.44	91.44	06/01/05	80 T	µg/L	1.9	µg/L	2.96	µg/L	0.73	µg/L

Notes:

-- Indicates no data are available

BTEX - benzene, toluene, ethylbenzene, and xylenes

COI - contaminant of interest

GW - groundwater

ND - Analyte was analyzed for but not detected, no information on detection limits available.

TCE - trichloroethylene

TZW - transition zone water

Reason codes for qualifiers:

J - The associated numerical value is an estimated quantity.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:

T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table C3.6-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Rhone Poulen.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; cm-Sediment and TZW)	Sample Date	1,2-Dichlorobenzene		Silvex (2,4,5-TP)		TCE		Arsenic	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
--	Upland GW	--	Organics=Total, Metals=Dissolved	AL2-17	Fill/Shallow Alluvium Zone Wells	--	04/22/02	0.75 J	µg/L	0.906 J	µg/L	ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	AL5-19	Fill/Shallow Alluvium Zone Wells	--	10/05/00	0.6 J	µg/L	ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-01-26	Fill/Shallow Alluvium Zone Wells	--	09/22/00	ND		ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-03-S	Fill/Shallow Alluvium Zone Wells	--	04/16/02	ND		ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-05-24	Fill/Shallow Alluvium Zone Wells	--	04/22/04	28200	µg/L	45.5	µg/L	218	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-05-34	Fill/Shallow Alluvium Zone Wells	--	04/22/04	12600	µg/L	ND		3520	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-08-27	Fill/Shallow Alluvium Zone Wells	--	03/23/00	279	µg/L	ND		748			
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-06-30	Fill/Shallow Alluvium Zone Wells	--	04/10/02	0.62 J	µg/L	ND		ND		1.21	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-07-30	Fill/Shallow Alluvium Zone Wells	--	05/03/02	ND		ND		ND		1.92	U µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-03-S	Fill/Shallow Alluvium Zone Wells	--	10/09/00	3.23	µg/L	ND		ND		5.27	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-04-S	Fill/Shallow Alluvium Zone Wells	--	10/09/00	4.01	µg/L	ND		ND		22.5	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-08-26	Fill/Shallow Alluvium Zone Wells	--	04/16/02	1.68	µg/L	ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-08-26	Fill/Shallow Alluvium Zone Wells	--	04/18/02	ND		ND		12.6	J µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-09	Fill/Shallow Alluvium Zone Wells	--	10/06/00	32.9	µg/L	6.91	µg/L	ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-11-S	Fill/Shallow Alluvium Zone Wells	--	04/14/04	ND		ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-12-S	Fill/Shallow Alluvium Zone Wells	--	10/10/00	0.11 J	µg/L	ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-16-31	Fill/Shallow Alluvium Zone Wells	--	04/08/02	1.61	µg/L	ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	AL2-32	Alluvium Zone Wells	--	04/20/04	1330	µg/L	814	µg/L	ND		29	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	AL2-46	Alluvium Zone Wells	--	04/21/04	10400	µg/L	ND		360	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	AL5-35	Alluvium Zone Wells	--	10/04/00	6350	µg/L	4.28	µg/L	ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	AL5-62	Alluvium Zone Wells	--	04/04/00	755	µg/L	9.23	J µg/L	50			
--	Upland GW	--	Organics=Total, Metals=Dissolved	AL6-96	Alluvium Zone Wells	--	04/19/04	943	µg/L	22.5	µg/L	ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-01-41	Alluvium Zone Wells	--	09/20/00	ND		ND		ND		0.56	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-01-56	Alluvium Zone Wells	--	09/20/00	ND		ND		ND		1.22	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-02-46	Alluvium Zone Wells	--	09/25/00	0.98 J	µg/L	ND		ND		9.08	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-02-62	Alluvium Zone Wells	--	09/25/00	ND		ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-03-27	Alluvium Zone Wells	--	09/27/00	26	µg/L	ND		1.94	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-03-49	Alluvium Zone Wells	--	09/27/00	84	µg/L	ND		6.67	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-03-68	Alluvium Zone Wells	--	09/27/00	ND		ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-03-81	Alluvium Zone Wells	--	04/13/04	0.09	µg/L	ND		ND		3.05	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-03-I	Alluvium Zone Wells	--	04/13/04	0.8	µg/L	ND		ND		1.46	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-04-27	Alluvium Zone Wells	--	04/19/02	7250	µg/L	220	µg/L	213	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-04-47	Alluvium Zone Wells	--	04/19/02	191	µg/L	1.82	µg/L	ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-04-63	Alluvium Zone Wells	--	09/27/00	ND		ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-05-52	Alluvium Zone Wells	--	04/22/04	2460	µg/L	10.4	µg/L	95.2	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-06-S	Alluvium Zone Wells	--	10/13/00	ND		ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-07-S	Alluvium Zone Wells	--	10/13/00	ND		ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-08-46	Alluvium Zone Wells	--	03/28/00	2760 J	µg/L	ND		73 J	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-08-64	Alluvium Zone Wells	--	09/26/00	64.3	µg/L	ND		ND		11.9	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-09-23	Alluvium Zone Wells	--	04/17/02	217	µg/L	25.8	µg/L	ND		53.1	J µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-09-42	Alluvium Zone Wells	--	04/17/02	411	µg/L	12.9	µg/L	ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-09-58	Alluvium Zone Wells	--	04/18/02	ND		ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-10-24	Alluvium Zone Wells	--	04/19/04	ND		ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-10-44	Alluvium Zone Wells	--	09/25/00	ND		ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-11-37	Alluvium Zone Wells	--	04/12/02	ND		ND		1.17	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	PP-08	Alluvium Zone Wells	--	10/05/00	808	µg/L	10.3	µg/L	ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-01-31	Alluvium Zone Wells	--	04/05/02	ND		ND		4.28	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-01-31	Alluvium Zone Wells	--	04/15/04	ND		ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-01-51	Alluvium Zone Wells	--	04/08/02	ND		ND		11.6	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-01-51	Alluvium Zone Wells	--	04/15/04	279	µg/L	15.1	µg/L	4.52	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-02-31	Alluvium Zone Wells	--	04/04/02	ND		ND		132	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-02-49	Alluvium Zone Wells	--	04/04/02	2.27	µg/L	ND		3.77	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-02-49	Alluvium Zone Wells	--	05/30/02	ND		ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-02-66	Basalt Zone Wells	--	04/13/05	ND		ND		8.4	U µg/L		
--</															

Table C3.6-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Rhone Poulen.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; cm-Sediment and TZW)	Sample Date	1,2-Dichlorobenzene	Silvex (2,4,5-TP)	TCE	Arsenic				
								Concentration	Units	Concentration	Units				
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-07-119	Basalt Zone Wells		04/14/05			0.768	µg/L				
--	Upland GW	--	Organics=Total, Metals=Dissolved	RPW-03	Alluvium Zone Wells	--	09/22/00			0.34	µg/L				
--	Upland GW	--	Organics=Total, Metals=Dissolved	RPW-05	Alluvium Zone Wells	--	09/27/00	ND	ND						
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-03-D	Alluvium Zone Wells	--	10/09/00	ND	ND						
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-03-I	Alluvium Zone Wells	--	04/08/02	9.76	µg/L	0.509 J	µg/L				
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-04-89	Alluvium Zone Wells	--	10/09/00	0.16 J	µg/L	ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-04-I	Alluvium Zone Wells	--	10/09/00	2.38	µg/L	ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-06-S	Alluvium Zone Wells	--	03/30/00	2.44		ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-06-D	Alluvium Zone Wells	--	09/28/00	1.59	µg/L	ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-08	Alluvium Zone Wells	--	10/05/00				ND				
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-08	Alluvium Zone Wells	--	04/17/02	1.39	µg/L	ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-09-116	Alluvium Zone Wells	--	04/20/04	2160	µg/L	17.7	µg/L				
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-09-86	Alluvium Zone Wells	--	10/06/00	2.92	µg/L	ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-10	Alluvium Zone Wells	--	10/11/00	1210	µg/L	20	µg/L				
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-11-D	Alluvium Zone Wells	--	04/14/04	569	µg/L	28.8	µg/L				
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-11-I	Alluvium Zone Wells	--	04/11/02				5.78	µg/L			
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-11-J	Alluvium Zone Wells	--	04/14/04	ND		ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-12-D	Alluvium Zone Wells	--	10/10/00	ND		ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-12-I	Alluvium Zone Wells	--	10/10/00	0.17 J	µg/L	ND		3.61	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-15-D	Alluvium Zone Wells	--	04/11/02	342	µg/L	5.33	µg/L	0.74 J	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-15-I	Alluvium Zone Wells	--	04/11/02	12.8	µg/L	1.08	µg/L	ND	21.4	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-15-S	Alluvium Zone Wells	--	04/11/02	ND		ND		ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-16-D	Alluvium Zone Wells	--	10/17/00	ND		ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-16-I	Alluvium Zone Wells	--	04/08/02	ND		ND			36	µg/L	
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-18-I	Alluvium Zone Wells	--	09/19/00	ND		ND				2.51	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-18-S	Alluvium Zone Wells	--	09/19/00	ND		ND				1.01	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-19-D	Alluvium Zone Wells	--	04/12/04	676	µg/L	27.9	µg/L	6.5	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-19-I	Alluvium Zone Wells	--	04/05/02	ND						5.57	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-19-J	Alluvium Zone Wells	--	04/12/04	226	µg/L	13	µg/L	2.3	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-19-S	Alluvium Zone Wells	--	04/05/02	0.69 J	µg/L	ND		ND		1.03	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	BST2W-61	Basalt Zone Wells	--	04/21/04	3930	µg/L	23.8	µg/L	772	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	BST5W-74	Basalt Zone Wells	--	04/04/00	715		57.8 J	µg/L	7.7			
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-01-76	Basalt Zone Wells	--	09/21/00	ND		ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-05-70	Basalt Zone Wells	--	04/22/04	658	µg/L	3.71	µg/L	13.7	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-09-80	Basalt Zone Wells	--	10/05/00			ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	MW-09-80	Basalt Zone Wells	--	07/02/01	ND		ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-01-65	Basalt Zone Wells	--	04/15/04	678	µg/L	31.6	µg/L	11.8	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-02-66	Basalt Zone Wells	--	04/12/04	105	µg/L	6.35	µg/L	1.26	µg/L	2.05	µg/L
--	Upland GW	--	Organics=Total, Metals=Dissolved	RP-07-119	Basalt Zone Wells	--	04/13/04	54.9	µg/L	10.4	µg/L	5.88	µg/L	ND	
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-06-B	Basalt Zone Wells	--	03/30/00	430		4.5 J	µg/L	0.42			
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-08-74	Basalt Zone Wells	--	04/16/02	327	µg/L	5.27	µg/L	ND			
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-11-B	Basalt Zone Wells	--	04/14/04	482	µg/L	14	µg/L	2.2	µg/L		
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-18-D	Basalt Zone Wells	--	09/19/00	ND		ND					
--	Upland GW	--	Organics=Total, Metals=Dissolved	W-18-D	Basalt Zone Wells	--	04/14/04					3.06	µg/L		
Inferred Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-B050	0	15	11/05/04	6.8 U	µg/kg					3.06 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-C329-A	0	30	09/28/04								
Groundwater Discharge Zone-2	Sediment	--	--	LW2-C335-A	0	30	10/05/04								
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G320	0	23	09/14/04	20 U	µg/kg					2.68 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G321	0	27	08/25/04	11 U	µg/kg	1.3 U	µg/kg	0.091 U	µg/kg	4.02	mg/kg
Groundwater Discharge Zone	Sediment	--	--	LW2-G322	0	21	08/23/04	11	µg/kg					4.5	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G323	0	29	09/14/04	8.8 U	µg/kg	1.07 U	µg/kg	0.11 J	µg/kg	2.26 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G324-1	0	25	07/22/04	1.9 U	µg/kg	1.13 U	µg/kg	0.093 U	µg/kg	4.58 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G324-2	0	26	07/22/04	2.1 J	µg/kg	1.08 U	µg/kg	0.089 U	µg/kg	4.74 J	mg/kg
Inferred Groundwater Discharge Zone Extension	Sediment	--	--	LW2-G325	0	21	08/20/04	7.8 J	µg/kg	0.11 U	µg/kg	0.097 U	µg/kg	2.77	mg/kg
Inferred Groundwater Discharge Zone Extension	Sediment	--	--	LW2-G326	0	24	08/20/04	1.9 U	µg/kg	1.14 U	µg/kg	0.09 U	µg/kg	3.1	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G327	0	27	09/14/04	4.2 U	µg/kg	1.23 U	µg/kg	0.11 U	µg/kg	6.68 J	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G329	0	25	08/25/04	3.9 J	µg/kg	1.02 U	µg/kg	0.082 U	µg/kg	3.47	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G330	0	27	08/20/04	3.2 J	µg/kg	1.46 U	µg/kg	0.13 U	µg/kg	4.22	mg/kg
Inferred Nearshore Groundwater Discharge Zone	Sediment</td														

Table C3.6-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Rhone Poulenc.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-Sediment and TZW)		Lower depth (ft-upland GW; cm-Sediment and TZW)		1,2-Dichlorobenzene		Silvex (2,4,5-TP)		TCE		Arsenic	
									Sample Date	Concentration	Units	Concentration	Units	Concentration	Units	Concentration
Inferred Nearshore Groundwater Discharge Zone	Sediment	--	--	LWG0106R004SDS015C00	0	15	10/22/02	19 U	µg/kg	1.6 UJ	µg/kg			2.7	mg/kg	
Inferred Nearshore Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-R2RP3	0	28	12/02/05	0.11 U	µg/kg	2.6 U	µg/kg	0.087 U	µg/kg	3.61	mg/kg	
Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-RP3C	0	24	12/01/05	160	µg/kg	5.4 J	µg/kg	0.095 U	µg/kg	3.36	mg/kg	
Groundwater Discharge Zone-2	Sediment	--	--	LWG2-PG-RP7B	0	30	12/01/05	0.75 J	µg/kg	3.8 U	µg/kg	0.13 U	µg/kg	3.45	mg/kg	
Groundwater Discharge Zone	Sediment	--	--	WLCDRD05PG06060	0	20	05/25/05	2.4 U	µg/kg	3.4 U	µg/kg	0.12 U	µg/kg	3.97	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCDRD05PG06262	0	27	05/25/05	2.9 U	µg/kg	4 U	µg/kg	0.14 U	µg/kg	3.48	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCDRD05PG06464	0	30	05/25/05	3.1 U	µg/kg	4.3 U	µg/kg	0.15 U	µg/kg	3.99	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCOFJ0222B0122B010	0	8	10/16/02	16.9 U	µg/kg	3.19 U	µg/kg			3.55	mg/kg	
Inferred Nearshore Groundwater Discharge Zone	Sediment	--	--	WLCOFJ0222B0222B020	0	8	10/16/02	18.2 U	µg/kg	3.13 U	µg/kg			20.8	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCOFJ0222C0122C010	0	9	10/16/02	341 U	µg/kg					27.7	mg/kg	
Inferred Nearshore Groundwater Discharge Zone	Sediment	--	--	WLCOFJ0222C0222C020	0	13	10/16/02	15.3 UJ	µg/kg					19.7	mg/kg	
Inferred Nearshore Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0770	0	10	09/21/97	19 U	µg/kg	3.1 U	µg/kg			10 U	mg/kg	
Groundwater Discharge Zone-2	Sediment	--	--	WR-WSI98SD0780	0	10	09/21/97	22	µg/kg	2.8 U	µg/kg			8 U	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0800	0	10	09/22/97	19 U	µg/kg	3.9 U	µg/kg			5 U	mg/kg	
Inferred Nearshore Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD0810	0	10	09/22/97	20 U	µg/kg	2.8 U	µg/kg			8 U	mg/kg	
Low-To-No Groundwater Discharge Zone	TZW	Peep	--	LWG2-P-RP7E	0	38	12/01/05	0.12 U	µg/L	0.086 U	µg/L	0.14 U	µg/L	7.09	µg/L	
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-R2RP1	30	30	10/26/05	0.3 J	µg/L	0.064 U	µg/L	0.14 U	µg/L	11.1 J	µg/L	
Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-R2RP1-FILT	30	30	10/26/05			0.32 U	µg/L			11.2 J	µg/L	
Inferred Nearshore Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-R2RP2	30	30	10/26/05	0.42 J	µg/L	0.067 U	µg/L	0.14 U	µg/L	5.71 JT	µg/L	
Inferred Nearshore Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-R2RP2-FILT	30	30	10/26/05			0.06 U	µg/L			5.91 J	µg/L	
Inferred Nearshore Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-R2RP3	30	30	10/22/05	0.12 U	µg/L	0.065 U	µg/L	0.14 U	µg/L	5.96	µg/L	
Inferred Nearshore Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-R2RP3-Filt	30	30	10/22/05			0.064 U	µg/L			3.83	µg/L	
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-RP2E	30	30	10/27/05			26	µg/L	0.37 U	µg/L	0.14 U	µg/L	
Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-RP2E-FILT	30	30	10/26/05					0.34 U	µg/L	11 J	µg/L	
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-RP3C	30	30	10/28/05	640	µg/L					0.67 U	µg/L	
Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-RP3C Filt	30	30	10/28/05							22.4 J	µg/L	
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-RP3E	30	30	10/27/05	270	µg/L	22	µg/L			1.1	µg/L	
Groundwater Discharge Zone-2	TZW	Trident	Unfiltered	LWG2-T30-RP7B	30	30	10/26/05			18	µg/L	0.063 U	µg/L	0.14 U	µg/L	
Groundwater Discharge Zone-2	TZW	Trident	Filtered	LWG2-T30-RP7B-FILT	30	30	10/26/05					0.065 U	µg/L	4.33 J	µg/L	
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-RP2E	150	150	10/27/05	44	µg/L	4	µg/L			0.85	µg/L	
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-RP3C	150	150	10/28/05	310	µg/L					0.27 U	µg/L	
Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T90-RP3C-Filt	150	150	10/28/05							21 J	µg/L	
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-RP3E	90	90	10/27/05	98	µg/L	1.1	µg/L			0.14 U	µg/L	
Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T90-RP3E-FILT	90	90	10/26/05							8 J	µg/L	
Groundwater Discharge Zone	TZW	Trident	Unfiltered											2.1 J	µg/L	

Notes:

-- Indicates no data are available

COI - contaminant of interest

GW - groundwater

ND - Analyte was analyzed for but not detected, no information on detection limits available.

TCE - trichloroethene

TZW - transition zone water

Reason codes for qualifiers:

J - The associated numerical value is an estimated quantity.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:

T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table C3.7-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Arkema.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Sample Date	4,4'-DDx		Chlorobenzene		Total Chromium		Perchlorate		Arsenic	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-2	--	--	06/09/03	8 U	µg/L	13700	µg/L	NA		1400	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-3	--	--	06/09/03	0.4481	µg/L	176	µg/L	NA		92 UF	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-4	--	--	06/09/03	4.203	µg/L	646	µg/L	2.36	µg/L	100 UF	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-5	--	--	06/06/03	0.0916	µg/L	23.1	µg/L	NA		NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-6r	--	--	06/05/03	0.214	µg/L	2620	µg/L	18.9	µg/L	27 UF	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-7	--	--	06/04/03	0.08 U	µg/L	0.500	U	NA		NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-8i	--	--	06/09/03	0.08 U	µg/L	22.7	µg/L	NA		20 U	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-9i	--	--	06/09/03	1.1	µg/L	32100	µg/L	NA		730	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-10i	--	--	06/10/03	0.0909	U	15800	µg/L	NA		260	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-11i	--	--	06/10/03	1.2	µg/L	0.71 U	µg/L	NA		20 U	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-12i	--	--	06/03/03	0.08 U	µg/L	0.500	U	NA		NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-13d	--	--	06/09/03	0.0807	µg/L	10.6	µg/L	NA		20 U	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-14i	--	--	06/06/03	0.0439	µg/L	0.5 U	µg/L	NA		NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-15r	--	--	06/10/03	141.4	µg/L	13300	µg/L	NA		350	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-16i	--	--	06/05/03	-- R		17.5	µg/L	992	µg/L	33 UF	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-17si	--	--	06/09/03	1.44	µg/L	73200	µg/L	NA		9900	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-18	--	--	06/06/03	0.08 U	µg/L	3.06	U	NA		NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-19	--	--	06/06/03	0.3235	µg/L	0.64	U	NA		82 UF	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-20	--	--	06/05/03	0.2818	µg/L	215	µg/L	NA		NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-22	--	--	06/10/03	0.348	U	128	µg/L	NA		NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-23	--	--	06/04/03					1.17	µg/L	NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-23	--	--	07/29/03	0.232	U	µg/L			NA		20 U,NV	µg/L	
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-24	--	--	06/05/03					NA		NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-25	--	--	06/06/03					9790	µg/L	NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-25	--	--	07/29/03					NA		290000 NV	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-26	--	--	06/04/03					1020	µg/L	NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-26	--	--	07/29/03					NA		1200 NV	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-27	--	--	06/04/03					4300	µg/L	210000	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-28i	--	--	06/06/03					1 U	µg/L	NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-28i	--	--	07/29/03					NA		20 U,NV	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-29	--	--	06/04/03	0.08 U	µg/L	28.4	µg/L			110 UF	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-30	--	--	06/04/03	0.08 U	µg/L	562	µg/L			7900	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-31i	--	--	06/04/03	0.08 U	µg/L	1150	µg/L			4700	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-32ia	--	--	06/04/03	0.08 U	µg/L	238	µg/L			200000	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-33	--	--	06/11/03	0.518	U	226	µg/L			320	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-33	--	--	06/11/03	0.678	U	601	µg/L			840	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-33a	--	--	06/05/03	-- R		2.51	U	µg/L		532	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-33 (Dup)	--	--	06/05/03	0.4162	µg/L	514	µg/L			570	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	MWA-34ia	--	--	06/06/03			142	µg/L			4600	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	NMP-3D	--	--	06/11/03	5.8 U	µg/L	127000	µg/L	NA		NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	NMP-4D	--	--	06/10/03	288.26	µg/L	185000	µg/L	NA		NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	NMP-4D (Dup)	--	--	06/10/03	243.86	µg/L	146000	µg/L	NA		NA			
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	ARK-08-15	--	--	08/10/05							9 J	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	ARK-09-16	--	--	08/11/05							9.8 J	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	ARK-07-45	--	--	08/09/05							10.9 U	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	ARK-05-22	--	--	08/17/05							24.7	µg/L		
--	Upland GW	--	Organics, Cr=Total; As=Dissolved	ARK-07-14	--	--	08/09/05							29.6 U	µg/L		
Variable Groundwater Discharge Zone	In-River GW	--	Total	WB-1	4	8	6/4/2002	49.41	J	980	µg/L			--			
Variable Groundwater Discharge Zone	In-River GW	--	Total	WB-2	3.7	7.7	6/4/2002	35.25	J	240	µg/L			--			
Variable Groundwater Discharge Zone	In-River GW	--	Total	WB-3	11	15	6/6/2002	1.131	J	70	µg/L			--			
Variable Groundwater Discharge Zone	In-River GW	--	Total	WB-3 (dup)													

Table C3.7-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Arkema.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Sample Date	4,4'-DDx		Chlorobenzene		Total Chromium		Perchlorate		Arsenic		
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units	
Variable Groundwater Discharge Zone	In-River GW	--	Total	WB-14	4	8	2/27/2003	43	µg/L	9300	µg/L			80 U	µg/L			
Variable Groundwater Discharge Zone	In-River GW	--	Total	WB-14	17	21	2/27/2003			210	µg/L			40 U	µg/L			
Low-To-No Groundwater Discharge Zone	In-River GW	--	Total	WB-15	1.3	5.3	2/17/2003	3.3	µg/L	0.033	µg/L	20	µg/L	6.6	µg/L			
Low-To-No Groundwater Discharge Zone	In-River GW	--	Total	WB-16	3.4	4.4	2/19/2003	0.033	µg/L	0.67	µg/L	2.3	µg/L	81 J	µg/L			
Variable Groundwater Discharge Zone	In-River GW	--	Total	WB-18	5	9	2/25/2003	0.097 U	µg/L	0.5 U	µg/L	4 U	µg/L					
Low-To-No Groundwater Discharge Zone	In-River GW	--	Total	WB-19	2.9	3.9	2/25/2003	0.011 U	µg/L	79	µg/L	210 J	µg/L					
Low-To-No Groundwater Discharge Zone	In-River GW	--	Total	WB-20	2.5	4.5	2/24/2003	0.013	µg/L	220	µg/L	200 U	µg/L					
Low-To-No Groundwater Discharge Zone	In-River GW	--	Total	WB-21	4.3	8.3	2/20/2003	0.111	µg/L	100 J	µg/L	200 UJ	µg/L					
Low-To-No Groundwater Discharge Zone	In-River GW	--	Total	WB-21 (dup)	4.3	8.3	2/20/2003											
Low-To-No Groundwater Discharge Zone	In-River GW	--	Total	WB-22	3.5	7.5	2/21/2003											
Variable Groundwater Discharge Zone	In-River GW	--	Total	WB-23	3.6	7.6	2/18/2003	0.333 J	µg/L	2.9	µg/L	370000	µg/L					
Variable Groundwater Discharge Zone	In-River GW	--	Total	WB-23	16.6	20.6	2/18/2003			16000	µg/L	1000 U	µg/L					
Variable Groundwater Discharge Zone	In-River GW	--	Total	WB-25	19.7	21.7	3/10/2003	8.1	µg/L									
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-C356-A	0	30	11/09/04											
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-C359-A	0	30	10/21/04											
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	LW2-G353-1	0	26	08/23/04	4030 JT	µg/kg	1.24 U	µg/kg	35.2	mg/kg	4.24	mg/kg			
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	LW2-G353-2	0	27	08/23/04	5610 JT	µg/kg	0.99	µg/kg	35.5	mg/kg	4.36	mg/kg			
Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-G355	0	27	10/29/04	9230 JT	µg/kg	1.52 U	µg/kg	47.9	mg/kg	8.37	mg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G356	0	29	08/26/04	230 JT	µg/kg	1.18 U	µg/kg	35.3	mg/kg	5.58	mg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G359	0	26	08/25/04	26.4 JT	µg/kg	0.085	µg/kg	34.2	mg/kg	4.94	mg/kg			
Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-G360	0	29	10/28/04	15300 JT	µg/kg	0.81	µg/kg	58.4 J	mg/kg	7.43 J	mg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G362-1	0	26	10/22/04	73 JT	µg/kg			31.5 T	mg/kg	4.59 T	mg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G362-2	0	27	10/22/04	83 JT	µg/kg			28.4	mg/kg	4.21	mg/kg			
Nearshore Groundwater Discharge Zone	Sediment	--	--	LW2-G366	0	30	10/22/04	3870 JT	µg/kg			43.6 T	mg/kg	5.38 T	mg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G368	0	26	10/08/04	32.5 JT	µg/kg			34.4	mg/kg	3.7 J	mg/kg			
Nearshore Groundwater Discharge Zone	Sediment	--	--	LWG0107R006SDS015C00	0	15	11/12/02	10600 T	µg/kg			42.2	mg/kg	4.4	mg/kg			
Nearshore Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-AP2A	0	24	11/30/05	6090 JT	µg/kg	2.8 U	µg/kg	16.3 J	mg/kg	22 U	µg/kg	5.97	mg/kg	
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	LWG2-PG-AP2D	0	30	11/30/05	1980 JT	µg/kg	32000 U	µg/kg	33.1 JT	mg/kg	22 UT	µg/kg	3.47 T	mg/kg	
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	LWG2-PG-AP4C	0	29	11/30/05	2310 JT	µg/kg	0.075	µg/kg	39 J	mg/kg	22 U	µg/kg	3.62	mg/kg	
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	LWG2-PG-AP4C-2	0	29	11/30/05	1280 JT	µg/kg	0.52 U	µg/kg	38.5 J	mg/kg	22 U	µg/kg	3.41	mg/kg	
Nearshore Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-CP7A	0	30	11/30/05	1900 JT	µg/kg	2.6 J	µg/kg	85.2 J	mg/kg	96200	µg/kg	7.8	mg/kg	
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	LWG2-PG-CP7D	0	30	11/30/05	70.3 JT	µg/kg	0.4	µg/kg	35.9 J	mg/kg	269000	µg/kg	3.54	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-CP9A	0	26	11/30/05	524 JT	µg/kg	0.26	µg/kg	270 J	mg/kg	22 U	µg/kg	3.38	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-CP9D	0	30	11/30/05	48.7 JT	µg/kg	0.2	µg/kg	31.3 J	mg/kg	22 U	µg/kg	3.41	mg/kg	
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	LWG2-PG-R2AP2	0	29	11/30/05	1420 JT	µg/kg	0.61	µg/kg	37.2 J	mg/kg	22 U	µg/kg	3.89	mg/kg	
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	LWP-TZSAP03B-1	0	30	01/19/05	1870 T	µg/kg	4.4 U	µg/kg							
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	LWP-TZSAP03B-2	0	30	01/19/05	6950 T	µg/kg	1	µg/kg							
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	LWP-TZSAP04B	0	30	01/19/05	25400 JT	µg/kg	5.3	µg/kg							
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWP-TZSAP04D	0	30	01/18/05	864 T	µg/kg	35000	µg/kg							
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	LWP-TZSCP06C	0	30	01/18/05					52.85 T	mg/kg	26 UT	µg/kg			
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	LWP-TZSCP07B	0	30	01/18/05					44.6	mg/kg	274000	µg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWP-TZSCP08D-1	0	30	01/18/05					36.1	mg/kg	26 U	µg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWP-TZSCP08D-2	0	30	01/18/05					34.8	mg/kg	26 U	µg/kg			
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	WLCAFS97S014W4166	0	10	06/11/97							4.9	mg/kg			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCDRD05PG07272	0	28	05/25/05	889 T	µg/kg	1.1 J	µg/kg	32 J	mg/kg					
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	WLRELFF99OSS002SD0006	0	10	01/19/99	84909 T	µg/kg	4.5	µg/kg							
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLRELFF99OSS003SD0021	0	10	01/20/99	66 T	µg/kg	34000	µg/kg							
Variable Groundwater Discharge Zone (Lower Rate)	Sediment	--	--	WLRELFF99														

Table C3.7-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Arkema.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; ft bml-in-river GW; cm-Sediment and TZW)	Sample Date	4,4'-DDx		Chlorobenzene		Total Chromium		Perchlorate		Arsenic	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Nearshore Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-AP3A-Filt	30	30	10/10/05	0.077 UT	µg/L	0.19 U	µg/L	7.93	µg/L				
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Unfiltered	LWG2-T30-AP3D	30	30	10/11/05			12000	µg/L	40 U	µg/L				
Nearshore Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-CP6A	30	30	10/12/05			0.34 J	µg/L	105 T	µg/L	1.6	µg/L		
Nearshore Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-CP6A-FILT	30	30	10/12/05			0.77 U	µg/L	0.21 U	µg/L				
Nearshore Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-CP7A	30	30	10/12/05			2	µg/L	10.8	µg/L	5.22	µg/L		
Nearshore Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-CP7A-FILT	30	30	10/12/05			8.91	µg/L	6.5	µg/L				
Nearshore Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-CP7B	30	30	10/12/05			1.5	µg/L	177000	µg/L	0.5 U	µg/L		
Nearshore Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-CP7B-FILT	30	30	10/12/05			1.44	µg/L	0.43 U	µg/L				
Nearshore Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-CP8B	30	30	10/12/05			0.58	µg/L	6.29	µg/L	0.72	µg/L		
Nearshore Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-CP8B-FILT	30	30	10/12/05			3.89	µg/L	0.55 U	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-CP9A	30	30	10/11/05			5.5	µg/L	14.5	µg/L	0.66 U	µg/L		
Low-To-No Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-CP9A-filt	30	30	10/11/05			0.86	µg/L	0.69 U	µg/L				
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Unfiltered	LWG2-T30-R2AP2	30	30	10/11/05	0.15 UT	µg/L	24	µg/L	3.62	µg/L	20000 U	µg/L	5.95	µg/L
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Filtered	LWG2-T30-R2AP2-filt	30	30	10/11/05			1.97	µg/L			5.22	µg/L		
Nearshore Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-AP3A	150	150	10/10/05	4.59 JT	µg/L	710	µg/L	9.62	µg/L	4000 U	µg/L	14.2	µg/L
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Unfiltered	LWG2-T90-AP3D	150	150	10/11/05	0.12 JT	µg/L	30000	µg/L	2.21 J	µg/L	40 U	µg/L	6.93	µg/L
Nearshore Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-CP6A	150	150	10/12/05			1.1	µg/L	24.2	µg/L	2890	µg/L	5.85	µg/L
Nearshore Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-CP7B	150	150	10/12/05			1.9	µg/L	27.5	µg/L	136000	µg/L	9.53	µg/L
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Unfiltered	LWG2-T90-CP7D	150	150	10/12/05			1.6	µg/L	6.1	µg/L	210000	µg/L	0.31 U	µg/L
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Unfiltered	LWG2-T90-R2AP2	150	150	10/11/05	2.87 JT	µg/L	46	µg/L	19.1	µg/L	40000 U	µg/L	3.17	µg/L
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Filtered	LWP1-T-AP03Bfilt	30	30	11/19/04	0.035 UT	µg/L								
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Unfiltered	LWP1-T-AP03Bunfilt	30	30	11/19/04	0.242 T	µg/L	13	µg/L						
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Filtered	LWP1-T-AP04Bfilt	30	30	11/19/04	0.0042 UT	µg/L								
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Unfiltered	LWP1-T-AP04Bunfilt	30	30	11/19/04	0.678 T	µg/L	200	µg/L						
Low-To-No Groundwater Discharge Zone	TZW	Trident	Filtered	LWP1-T-AP04Dfilt	30	30	11/19/04	0.008 UT	µg/L								
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWP1-T-AP04Dunfilt	30	30	11/19/04	0.0075 JT	µg/L	41	µg/L						
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Filtered	LWP1-T-CP06Cfilt	30	30	11/20/04			3 U	µg/L	10 UJ	µg/L				
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Unfiltered	LWP1-T-CP06Cunfilt	30	30	11/20/04			4.5 JT	µg/L	10 UJ	µg/L				
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Filtered	LWP1-T-CP07B60cmfilt	60	60	11/21/04			49.6	µg/L	49900 J	µg/L				
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Unfiltered	LWP1-T-CP07B60cmunfilt	60	60	11/21/04			102	µg/L	41600 J	µg/L				
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Filtered	LWP1-T-CP07Bfilt	30	30	11/20/04			95.9	µg/L	75200 J	µg/L				
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Trident	Unfiltered	LWP1-T-CP07Bunfilt	30	30	11/20/04			122	µg/L	58200 J	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Trident	Filtered	LWP1-T-CP08Dfilt	30	30	11/20/04			6 U	µg/L	10 UJ	µg/L				
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWP1-T-CP08Dunfilt	30	30	11/20/04			6 U	µg/L	10 UJ	µg/L				
Nearshore Groundwater Discharge Zone	TZW	Trident	Filtered	LWP1-T-CP10Afilt	30	30	11/21/04			3 U	µg/L	10 UJ	µg/L				
Nearshore Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWP1-T-CP10Aunfilt	30	30	11/21/04			4.1 J	µg/L	10 UJT	µg/L				
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Peepr	--	LWP-TZw3-AP03B-1	0	38	01/12/05	0.032 JT	µg/L	110	µg/L						
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Peepr	--	LWP-TZw3AP04B	0	38	01/11/05	0.017 UT	µg/L	150	µg/L						
Low-To-No Groundwater Discharge Zone	TZW	Peepr	--	LWP-TZw3AP04D	0	38	01/11/05	0.0135 JT	µg/L	12000	µg/L						
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Peepr	--	LWP-TZw3CP06C	0	38	01/11/05			3 U	µg/L	1 U	µg/L				
Variable Groundwater Discharge Zone (Lower Rate)	TZW	Peepr	--	LWP-TZw3CP07B-1	0	38	01/11/05			3.2 J	µg/L						
Low-To-No Groundwater Discharge Zone	TZW	Peepr	--	LWP-TZw3CP08D	0	38	01/11/05			3 U	µg/L	1 U	µg/L				

Notes:

-- Indicates no data are available

BML - below mudline

COI - contaminant of interest

GW - groundwater

NA - not analyzed

TZW - transition zone water

Reason codes for qualifiers:

J - The associated numerical value is an estimated quantity.

R - Rejected

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:

F - Field quality control sample criteria not met

NV - Not validated

T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table C3.8-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Willbridge.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Sediment and TZW)	Upper depth (ft-upland GW; cm-	Lower depth (ft-upland GW; cm-	Sample Date	BTEX		Total PAHs		Total Chromium		Total Arsenic	
									Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
--	Upland GW	--	Total	B-7	--	--	--	03/09/05	3 U	µg/L	20.31	µg/L	4.9	µg/L	33.8	µg/L
--	Upland GW	--	Total	B-7 dup	--	--	--	03/10/05	4 U	µg/L	19.854	µg/L	4.34	µg/L	34.2	µg/L
--	Upland GW	--	Total	B-9	--	--	--	03/08/05	5 U	µg/L	4.369	µg/L	1 U	µg/L	30.5	µg/L
--	Upland GW	--	Total	B-10	--	--	--	03/08/05	4.89	µg/L	10.911	µg/L	2.31	µg/L	39.5	µg/L
--	Upland GW	--	Total	B-11	--	--	--	03/09/05	12.15	µg/L	2.609	µg/L	5.34	µg/L	26.5	µg/L
--	Upland GW	--	Total	B-14	--	--	--	05/17/01	615.6	µg/L	5.101	µg/L	ND		37.3	µg/L
--	Upland GW	--	Total	B-15	--	--	--	03/29/04	50.96	µg/L	23.08	µg/L	39.4	µg/L	27.5	µg/L
--	Upland GW	--	Total	B-19	--	--	--	03/09/05	10.86	µg/L	28.76	µg/L	18.1	µg/L	40.7	µg/L
--	Upland GW	--	Total	B-20	--	--	--	03/09/05	2.62	µg/L	8.9	µg/L	1.13	µg/L	36	µg/L
--	Upland GW	--	Total	B-21	--	--	--	03/08/05	3 U	µg/L	24.52	µg/L	14.3	µg/L	55.9	µg/L
--	Upland GW	--	Total	B-26	--	--	--	06/24/04	90.5	µg/L	--		--		--	
--	Upland GW	--	Total	B-26	--	--	--	03/09/05			8.228	µg/L	2.74	µg/L	34.5	µg/L
--	Upland GW	--	Total	B-28	--	--	--	03/09/05	6.27	µg/L	1.18	µg/L	16.8	µg/L	7.28	µg/L
--	Upland GW	--	Total	B-29	--	--	--	03/09/05	3 U	µg/L	0.2 U	µg/L	83.9	µg/L	6.57	µg/L
--	Upland GW	--	Total	B-30	--	--	--	03/09/05	21.9	µg/L	2.212	µg/L	2.07	µg/L	17.4	µg/L
--	Upland GW	--	Total	B-32	--	--	--	12/16/04	3 U	µg/L	0.528	µg/L	24.6	µg/L	8.94	µg/L
--	Upland GW	--	Total	B-33	--	--	--	03/09/05	3 U	µg/L	23.45	µg/L	34.2	µg/L	26.4	µg/L
--	Upland GW	--	Total	B-99	--	--	--	09/24/02			2.132	µg/L	ND		12.4	µg/L
--	Upland GW	--	Total	B-101	--	--	--	03/09/05	17.8	µg/L			--		--	
--	Upland GW	--	Total	CR-1	--	--	--	03/08/05	3 U	µg/L	4.771	µg/L	1 U	µg/L	1.67	µg/L
--	Upland GW	--	Total	CR-3	--	--	--	03/09/05	3 U	µg/L	0.2 U	µg/L	23.9	µg/L	15.6	µg/L
--	Upland GW	--	Total	CR-6	--	--	--	06/28/04	0.5 U	µg/L	--		--		--	
--	Upland GW	--	Total	CR-7	--	--	--	06/28/04	641.1	µg/L			--		--	
--	Upland GW	--	Total	CR-8	--	--	--	05/16/01			2.547	µg/L	1.28	µg/L	13.5	µg/L
--	Upland GW	--	Total	CR-8	--	--	--	12/15/04	0.5 U	µg/L	--		--		--	
--	Upland GW	--	Total	CR-9	--	--	--	05/16/01	ND		ND		1.51	µg/L	1.45	µg/L
--	Upland GW	--	Total	CR-9	--	--	--	05/16/01	ND		ND		ND		1.42	µg/L
--	Upland GW	--	Total	CR-10	--	--	--	12/15/04	44	µg/L	--		--		--	
--	Upland GW	--	Total	CR-11	--	--	--	05/16/01			0.37	µg/L	3.62	µg/L	58.7	µg/L
--	Upland GW	--	Total	CR-11	--	--	--	06/29/04	69.39	µg/L	--		--		--	
--	Upland GW	--	Total	CR-12	--	--	--	12/15/04	399	µg/L	--		--		--	
--	Upland GW	--	Total	CR-12	--	--	--	12/15/04	344	µg/L	--		--		--	
--	Upland GW	--	Total	CR-13	--	--	--	12/15/04	1011	µg/L	--		--		--	
--	Upland GW	--	Total	CR-14	--	--	--	12/15/04	414	µg/L	--		--		--	
--	Upland GW	--	Total	CR-15	--	--	--	12/15/04	774.9	µg/L	--		--		--	
--	Upland GW	--	Total	CR-16	--	--	--	12/15/04	0.5 U	µg/L	--		--		--	
--	Upland GW	--	Total	CR-17	--	--	--	12/15/04	0.5 U	µg/L	--		--		--	
--	Upland GW	--	Total	CR-18	--	--	--	08/16/99	0.5 U	µg/L	--		--		--	
--	Upland GW	--	Total	CR-19	--	--	--	12/15/04	363	µg/L	--		--		--	
--	Upland GW	--	Total	CR-20	--	--	--	12/15/04	905	µg/L	--		--		--	
--	Upland GW	--	Total	CR-21A	--	--	--	12/15/04	204.1	µg/L	--		--		--	
--	Upland GW	--	Total	CR-21B	--	--	--	12/15/04	0.5 U	µg/L	--		--		--	
--	Upland GW	--	Total	CR-22A	--	--	--	12/15/04	220.6	µg/L	--		--		--	
--	Upland GW	--	Total	CR-22B	--	--	--	06/28/04	0.5 U	µg/L	--		--		--	
--	Upland GW	--	Total	CR-23A	--	--	--	12/15/04	42.06	µg/L	--		--		--	
--	Upland GW	--	Total	CR-23B	--	--	--	12/15/04	0.5 U	µg/L	--		--		--	
--	Upland GW	--	Total	CR-24A	--	--	--	12/15/04	0.5 U	µg/L	--		--		--	
--	Upland GW	--	Total	CR-24B	--	--	--	12/15/04	0.5 U	µg/L	--		--		--	
--	Upland GW	--	Total	CR-25	--	--	--	12/15/04	32.3	µg/L	--		--		--	
--	Upland GW	--	Total	CR-26	--	--	--	03/09/05	3 U	µg/L	0.38	µg/L	18.2	µg/L	143	µg/L
--	Upland GW	--	Total	GPW-1	--	--	--	12/15/04	786.5	µg/L	--		--		--	
--	Upland GW	--	Total	GPW-3	--	--	--	12/15/04	9100	µg/L	--		--		--	
--	Upland GW	--	Total	MW-8 dup	--	--	--	09/27/04	5.406	µg/L	0.35 U	µg/L	5.98	µg/L	16	µg/L
--	Upland GW	--	Total	MW-8	--	--	--	09/27/04	5	µg/L	0.3 U	µg/L	4.54	µg/L	16.7	µg/L
--	Upland GW	--	Total	MW-10	--	--	--	05/16/01	16.834	µg/L	0.104	µg/L	ND		19.9	µg/L
--	Upland GW	--	Total	MW-11	--	--	--	05/16/01	16580	µg/L	572.41	µg/L	1.84	µg/L	44.5	µg/L
--	Upland GW	--	Total	MW-13	--	--	--	05/16/01	ND		ND		2.18	µg/L	1.74	µg/L

Table C3.8-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Willbridge.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-	Lower depth (ft-upland GW; cm-	Sediment and TZW)	Sediment and TZW)	Sample Date	BTEX		Total PAHs		Total Chromium		Total Arsenic	
										Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
--	Upland GW	--	Total	MW-23	--	--	02/22/01		281.8	µg/L	44.7	µg/L	1.75	µg/L	9.09	µg/L	
--	Upland GW	--	Total	MW-25	--	--	09/27/04		1 U	µg/L	0.384	µg/L	5.06	µg/L	71.2	µg/L	
--	Upland GW	--	Total	MW-26	--	--	09/27/04		16.04	µg/L	8.336	µg/L	2.06	µg/L	65.7	µg/L	
--	Upland GW	--	Total	MW-28	--	--	02/16/00		27.38	µg/L	22.412	µg/L	0.47	µg/L	0.32	µg/L	
--	Upland GW	--	Total	MW-31	--	--	05/17/01		ND		1.155	µg/L	ND		15	µg/L	
--	Upland GW	--	Total	MW-32	--	--	05/16/01		ND		ND		ND		ND		
--	Upland GW	--	Total	MW-33	--	--	09/27/04		1 U	µg/L	0.2 U	µg/L	6.28	µg/L	132	µg/L	
--	Upland GW	--	Total	MW-34	--	--	09/27/04		1 U	µg/L	0.135	µg/L	11.4	µg/L	87.9	µg/L	
--	Upland GW	--	Total	MW-36	--	--	09/27/04		1 U	µg/L	0.71	µg/L	2.38	µg/L	32	µg/L	
--	Upland GW	--	Total	MW-37	--	--	09/27/04		1 U	µg/L	0.557	µg/L	3.08	µg/L	24.2	µg/L	
--	Upland GW	--	Total	MW-39	--	--	09/27/04		7.45	µg/L	7.535	µg/L	24.8	µg/L	30.4	µg/L	
--	Upland GW	--	Total	MW-40	--	--	09/27/04		1 U	µg/L	0.2 U	µg/L	17.9	µg/L	61.1	µg/L	
--	Upland GW	--	Total	B-4	--	--	09/25/03		79.57	µg/L	17.457	µg/L	2.58	µg/L	31.6	µg/L	
--	Upland GW	--	Total	B-17 dup	--	--	05/17/01		204.52	µg/L	14.554	µg/L	5.18	µg/L	65.6	µg/L	
--	Upland GW	--	Total	B-17	--	--	05/17/01		212.94	µg/L	14.845	µg/L	4.06	µg/L	65	µg/L	
--	Upland GW	--	Total	B-18	--	--	05/17/01		0.502	µg/L	0.529	µg/L	7.74	µg/L	37.2	µg/L	
--	Upland GW	--	Total	B-22	--	--	05/26/00		3.74	µg/L	36.9	µg/L	10.5	µg/L	25.5	µg/L	
--	Upland GW	--	Total	B-35	--	--	09/28/04		124.8	µg/L	22.976	µg/L	8.29	µg/L	42.2	µg/L	
--	Upland GW	--	Total	B-36 dup	--	--	09/28/04		1.293	µg/L	2.163	µg/L	3.49	µg/L	23.3	µg/L	
--	Upland GW	--	Total	B-36	--	--	09/28/04				1.963	µg/L	2.22	µg/L	22.1	µg/L	
--	Upland GW	--	Total	B-37	--	--	09/28/04		1 U	µg/L	0.142	µg/L	2.18	µg/L	131	µg/L	
--	Upland GW	--	Total	B-40	--	--	05/17/01						NS/F		NS/F		
--	Upland GW	--	Total	U-2	--	--	09/28/04		1 U	µg/L	0.2 U	µg/L	3.18	µg/L	11.1	µg/L	
--	Upland GW	--	Total	U-3	--	--	05/17/01		9.61	µg/L	0.244	µg/L	3.59	µg/L	45	µg/L	
--	Upland GW	--	Total	U-4 dup	--	--	09/26/02		5.372	µg/L	19.191	µg/L	4.32	µg/L	18.3	µg/L	
--	Upland GW	--	Total	U-4	--	--	09/26/02		7.744	µg/L	22.662	µg/L	4.03	µg/L	18.3	µg/L	
--	Upland GW	--	Total	U-5	--	--	09/28/04		2.606	µg/L	16.71	µg/L	6.23	µg/L	9.87	µg/L	
--	Upland GW	--	Total	U-10	--	--	09/28/04		1 U	µg/L	0.2 U	µg/L	9.66	µg/L	6.57	µg/L	
--	Upland GW	--	Total	U-11	--	--	09/28/04		1 U	µg/L	0.455	µg/L	56.1	µg/L	10.6	µg/L	
--	Upland GW	--	Total	U-12	--	--	09/28/04		5.307	µg/L	8.428	µg/L	10.2	µg/L	36.9	µg/L	
--	Upland GW	--	Total	P-1	--	--	03/31/04				0.0405	µg/L	642	µg/L	52.7	µg/L	
--	Upland GW	--	Total	P-1	--	--	09/28/04		1 U	µg/L			--		--		
--	Upland GW	--	Total	P-2	--	--	09/28/04		1 U	µg/L	14.07		5.7	µg/L	10.3	µg/L	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-C532-A	0	30	10/18/05		0.3 UT	µg/kg	784.9	µg/kg	36.6	mg/kg	5.01	mg/kg	
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	LW2-G389	0	20	10/29/04		-- --	--	3.3 J	µg/kg	25.4	mg/kg	1.89	mg/kg	
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	LW2-G394	0	25	08/27/04		-- --	--	4915	µg/kg	39	mg/kg	4.23	mg/kg	
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	LW2-G399	0	22	08/27/04		-- --	--	2241	µg/kg	27.5	mg/kg	5.38	mg/kg	
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	LW2-G401	0	27	10/22/04		-- --	--	4222	µg/kg	29.7	mg/kg	4.54	mg/kg	
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	LW2-G404	0	25	08/27/04		0.27 JT	µg/kg	1232	µg/kg	34	mg/kg	4.24	mg/kg	
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	LW2-GBT020	0	10	12/06/05		0.33 UT	µg/kg	357.2 J	µg/kg	36.3	mg/kg	3.49	mg/kg	
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	LW2-GBT021	0	10	12/13/05		0.29 UT	µg/kg	426	µg/kg	33.3 J	mg/kg	4.25	mg/kg	
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	LW3-G689	0	24	11/16/07		-- --	--	1282.6	µg/kg	15.6	mg/kg	2.52 J	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW3-G692-1	0	30	12/04/07		-- --	--	741.3	µg/kg	27.9	mg/kg	3.01	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW3-G692-2	0	28	12/04/07		-- --	--	642.1	µg/kg	26.3 T	mg/kg	2.83 T	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW3-G694	0	20	11/16/07		-- --	--	1305.3	µg/kg	22.9	mg/kg	3.49 J	mg/kg	
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	LW3-GSP07W	0	19	10/15/07		-- --	--	57.68 J	µg/kg	23.5 J	mg/kg	2.09	mg/kg	
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	LWG2-PG-W9A	0	23	11/30/05		0.22 UT	µg/kg	5.64 J	µg/kg	29.1 J	mg/kg	2.32	mg/kg	
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	LWG2-PG-W9C	0	30	11/30/05		0.37 UT	µg/kg	571.8	µg/kg	33.5 J	mg/kg	3.52	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	NA-3A-0005	0	5	10/22/04		-- --	--	-- --	--	25.1	mg/kg	2.8	mg/kg	
Low-To-No Groundwater Discharge Zone	Sediment	--	--	NA-3B-0034	0	34	10/22/04		0.24 UT	µg/kg	1053.9 J	µg/kg	-- --	--	-- --	--	
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	WLCASF97S003W4157	0	10	06/12/97		-- --	--	1063	µg/kg	-- --	--	-- --	--	

Table C3.8-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Willbridge.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; cm-Sediment and TZW)	Sample Date	BTEX		Total PAHs		Total Chromium		Total Arsenic	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	WLCAF97S009W4172	0	10	06/11/97	-- --	--	1426	µg/kg	-- --	--	-- --	--
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCAF97S010W4171	0	10	06/11/97	-- --	--	1426	µg/kg	-- --	--	-- --	--
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCAF97S011W4170	0	10	06/11/97	-- --	--	2753	µg/kg	-- --	--	-- --	--
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCAF97S012W4168	0	10	06/11/97	-- --	--	680	µg/kg	-- --	--	-- --	--
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCAF97S012W4169	0	10	06/11/97	-- --	--	678	µg/kg	-- --	--	-- --	--
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCCPF01SD0102SD2S1C	0	30	06/07/01	200 UA	µg/kg	252.18	µg/kg	-- --	--	4.16	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCCPF01SD0105D5SC1C	0	30	06/07/01	200 UA	µg/kg	1514.8	µg/kg	-- --	--	4.31	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCDRD05PG07474	0	30	05/25/05	0.13 JT	µg/kg	403.3 J	µg/kg	27.4 J	mg/kg	3.92	mg/kg
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	WLCOFJ02220122010	0	10	10/21/02	-- --	--	384.6 J	µg/kg	10.7	mg/kg	3.47	mg/kg
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	WLCOFJ02220222020	0	15	10/21/02	-- --	--	2355 J	µg/kg	33.4	mg/kg	4.27	mg/kg
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	WLCOFJ022203122031	0	15	10/21/02	-- --	--	1714.9 J	µg/kg	21.3	mg/kg	3.91	mg/kg
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	WLCOFJ02220322030	0	15	10/21/02	-- --	--	28120	µg/kg	19.1	mg/kg	3.8	mg/kg
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	WLCOFJ02220422040	0	12	10/21/02	-- --	--	1886.1 J	µg/kg	31.9	mg/kg	4.26	mg/kg
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	WLCOFJ02220522050	0	12	10/21/02	-- --	--	6395.7 J	µg/kg	27.5	mg/kg	4.29	mg/kg
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	WLCOFJ02220622060	0	10	10/21/02	-- --	--	1580.4 J	µg/kg	25.4	mg/kg	3.88	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCWTG02ANCPD01A	0	2	07/16/02	5 UA	µg/kg	1401.6	µg/kg	-- --	--	4.1	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCWTG02ANCPD01B	0	15	07/16/02	3.5 UA	µg/kg	1881.7	µg/kg	-- --	--	3.8	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCWTG02ANCPD02A	0	2	07/16/02	4.8 UA	µg/kg	1082.6	µg/kg	-- --	--	3.5	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCWTG02ANCPD02B	0	15	07/16/02	4.2 UA	µg/kg	669.7	µg/kg	-- --	--	3.8	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCWTG02ANCPD03A	0	2	07/16/02	5.8 UA	µg/kg	1672.5	µg/kg	-- --	--	3.9	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCWTG02ANCPD03B	0	15	07/16/02	3.6 UA	µg/kg	445.2	µg/kg	-- --	--	5.5	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCWTG02ANCPD06A	0	2	07/16/02	5 UA	µg/kg	1387.7	µg/kg	-- --	--	3.2	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCWTG02ANCPD06B	0	15	07/16/02	4.5 UA	µg/kg	1125.3	µg/kg	-- --	--	3.8 T	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCWTG02ANCPD07A	0	2	07/16/02	5.8 UA	µg/kg	859.9	µg/kg	-- --	--	3.9	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCWTG02ANCPD07B	0	15	07/16/02	4.5 UA	µg/kg	310.7	µg/kg	-- --	--	3.3	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCWTG02ANCPD08A	0	2	07/16/02	6.6 UA	µg/kg	1104.2	µg/kg	-- --	--	4.8	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WLCWTG02ANCPD08B	0	15	07/16/02	5.1 UA	µg/kg	1094.1	µg/kg	-- --	--	4.3	mg/kg
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	WLRWTF98ATXSD3ATXSD3	0	12.7	12/18/98	50 UT	µg/kg	-- --	--	-- --	--	-- --	--
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	WLRWTF98ATXSD4ATXSD4	0	12.7	12/18/98	50 UT	µg/kg	32.53	µg/kg	-- --	--	-- --	--
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	WLRWTF98ATXSD5ATXSD5	0	12.7	12/18/98	50 UT	µg/kg	7 UJ	µg/kg	24.4	mg/kg	2.52	mg/kg
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	WLRWTF98HEVSD1HEVSD1	0	12.7	12/17/98	50 UT	µg/kg	7 UJ	µg/kg	39.6	mg/kg	1.25	mg/kg
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	WLRWTF98HEVSD2HEVSD2	0	12.7	12/17/98	50 UT	µg/kg	7 UJ	µg/kg	22.5	mg/kg	1.22	mg/kg
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	WLRWTF98HEVSD3HEVSD3	0	12.7	12/17/98	50 UT	µg/kg	7 UJ	µg/kg	28.5	mg/kg	2.42	mg/kg
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	WLRWTF98TOSSD1TOSSD1	0	12.7	12/17/98	50 UT	µg/kg	7 UJ	µg/kg	32.4	mg/kg	2.6	mg/kg
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	WLRWTF98TOSSD3TOSSD3	0	12.7	12/17/98	120 UT	µg/kg	1837 J	µg/kg	30.7	mg/kg	6.18	mg/kg
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	WR-WSI98SD1040	0	10	09/23/97	-- --	--	536	µg/kg	28	mg/kg	5 U	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD1050	0	10	09/23/97	-- --	--	576	µg/kg	37.5	mg/kg	6 U	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD1070	0	10	09/23/97	-- --	--	1964	µg/kg	38.3	mg/kg	6 U	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD1090	0	10	09/23/97	-- --	--	1765	µg/kg	37.7	mg/kg	6 U	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD1100	0	10	09/23/97	-- --	--	972	µg/kg	37.7	mg/kg	6 U	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD1120	0	10	09/23/97	-- --	--	1351	µg/kg	37.5	mg/kg	5 U	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD1130	0	10	09/23/97	-- --	--	907	µg/kg	38.9	mg/kg	6 U	mg/kg
Groundwater Discharge Zone (Higher Flow Rate)	Sediment	--	--	WR-WSI98SD1140	0	10	09/23/97	-- --	--	2007	µg/kg	24.3	mg/kg	3 U	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD1150	0	10	09/23/97	-- --	--	349	µg/kg	38.5	mg/kg	5 U	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD117000A	0	90	10/16/97	-- --	--	1519	µg/kg	35.1	mg/kg	4 U	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WSI98SD117000CC	0	10	09/23/97	-- --	--	890.5	µg/kg	28 T	mg/kg	4 UT	mg/kg
Groundwater Discharge Zone (Lower Flow Rate)	Sediment	--	--	WR-WSI98SD1180	0	10	09/23/97	-- --	--	2310 J	µg/kg	27.6	mg/kg	4 U	mg/kg
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Peeper	--	LWG2-P-W09C	0	38	11/28/05	0.8 JT	µg/L	2.03 JT	µg/L	22.4	µg/L	7.22 J	µg/L
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Peeper	--	LWG2-P-W4C	0	38	11/30/05	0.22 UT	µg/L	0.381 JT	µg/L	0.61 U	µg/L	14.7	µg/L
Groundwater Discharge Zone (Higher Flow Rate)															

Table C3.8-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Willbridge.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; cm-Sediment and TZW)	Sample Date	BTEX		Total PAHs		Total Chromium		Total Arsenic	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
Groundwater Discharge Zone (Higher Flow Rate)	TZW	Trident	Unfiltered	LWG2-T30-W12A	30	30	10/20/05	0.76 UT	µg/L	0.379 T	µg/L	1.43 T	µg/L	51.2 T	µg/L
Groundwater Discharge Zone (Higher Flow Rate)	TZW	Trident	Filtered	LWG2-T30-W12A-Filt	30	30	10/19/05	-- --	--	0.184 T	µg/L	0.54	µg/L	51.8	µg/L
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Trident	Unfiltered	LWG2-T30-W6A	30	30	10/20/05	0.56 UT	µg/L	0.036 UT	µg/L	3.36	µg/L	1.1	µg/L
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Trident	Filtered	LWG2-T30-W6A-Filt	30	30	10/20/05	-- --	--	0.042 UT	µg/L	0.21	µg/L	0.56	µg/L
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Trident	Unfiltered	LWG2-T30-W7C	30	30	10/20/05	0.9 UT	µg/L	0.043 UT	µg/L	27.9	µg/L	5.48	µg/L
Groundwater Discharge Zone (Lower Flow Rate)	TZW	Trident	Filtered	LWG2-T30-W7C-Filt	30	30	10/20/05	-- --	--	0.073 UT	µg/L	0.26	µg/L	1.92	µg/L
Groundwater Discharge Zone (Higher Flow Rate)	TZW	Trident	Unfiltered	LWG2-T30-W9A	30	30	10/20/05	0.74 UT	µg/L	0.037 UT	µg/L	1.76	µg/L	0.89	µg/L
Groundwater Discharge Zone (Higher Flow Rate)	TZW	Trident	Filtered	LWG2-T30-W9A-Filt	30	30	10/20/05	-- --	--	0.0031 JT	µg/L	0.2 J	µg/L	0.55	µg/L

Notes:

-- Indicates no data are available

BTEX - benzene, toluene, ethylbenzene, and xylenes

COI - contaminant of interest

GW - groundwater

ND - Analyte was analyzed for but not detected, no information on detection limits available.

NS/F = Not sampled floating product present.

PAH - polycyclic aromatic hydrocarbon

TZW - transition zone water

Reason codes for qualifiers:

J - The associated numerical value is an estimated quantity.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:

A - summed value based on limited number of analytes

T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table C3.9-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gunderson.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; cm-Sediment and TZW)	Sample Date	1,1,1-Trichloroethane		1,1-Dichloroethene		Lead		Chromium		Arsenic	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
--	Upland GW	--	All Analytes are totals	MW-19	--	--	--	--		--		15		10			
--	Upland GW	--	All Analytes are totals	MW-20	--	--	--	0		0		12		100			
--	Upland GW	--	All Analytes are totals	MW-21	--	--	--	57.7		24.2		48		70			
--	Upland GW	--	All Analytes are totals	MW-22	--	--	--	--		--		150		220			
--	Upland GW	--	All Analytes are totals	MW-27	--	--	--	63		123		--		--			
--	Upland GW	--	All Analytes are totals	MW-36	--	--	--	2080		793		--		--			
--	Upland GW	--	All Analytes are totals	MW-37	--	--	--	0		0		--		--			
--	Upland GW	--	All Analytes are totals	MW-38	--	--	--	222		185		--		--			
--	Upland GW	--	All Analytes are totals	MW-39	--	--	--	35.2		23		--		--			
--	Upland GW	--	All Analytes are totals	MW-40	--	--	--	2.43		1.1		--		--			
--	Upland GW	--	All Analytes are totals	MW-43	--	--	--	1.06		0		--		--			
--	Upland GW	--	All Analytes are totals	MW-44	--	--	--	1.56		2.1		--		--			
--	Upland GW	--	All Analytes are totals	MW-45	--	--	--	1550		296		--		--			
--	Upland GW	--	All Analytes are totals	MW-49	--	--	--	244		236		--		--			
--	Upland GW	--	All Analytes are totals	MW-50	--	--	--	1.22		0		--		--			
--	Upland GW	--	All Analytes are totals	MW-51	--	--	--	6		2.8		--		--			
--	Upland GW	--	All Analytes are totals	MW-52	--	--	--	88.1		180		--		--			
--	Upland GW	--	All Analytes are totals	MW-70	--	--	--	825		126		--		--			
--	Upland GW	--	All Analytes are totals	MW-71	--	--	--	522		328		--		--			
--	Upland GW	--	All Analytes are totals	WEX-60	--	--	--	204		265		--		--			
--	Upland GW	--	All Analytes are totals	MW-15	--	--	--	0		0		43.1		23.6			
--	Upland GW	--	All Analytes are totals	MW-17	--	--	--	--		--		31		40			
--	Upland GW	--	All Analytes are totals	MW-18	--	--	--	0		0		130		0			
--	Upland GW	--	All Analytes are totals	MW-23	--	--	--	0		0		110		0			
--	Upland GW	--	All Analytes are totals	MW-24	--	--	--	0		0		12		0			
--	Upland GW	--	All Analytes are totals	MW-26	--	--	--	0		0		16		10			
--	Upland GW	--	All Analytes are totals	MW-31	--	--	--	--		--		8		30			
--	Upland GW	--	All Analytes are totals	MW-66	--	--	--	0		0		7.74		--			
--	Upland GW	--	All Analytes are totals	MW-67	--	--	--	0		0		5.36		4.18			
--	Upland GW	--	All Analytes are totals	SMW-11	--	--	--	0		0		--		--			
--	Upland GW	--	All Analytes are totals	SMW-12	--	--	--	0		0		--		--			
--	Upland GW	--	All Analytes are totals	SMW-13	--	--	--	0		0		--		--			
--	Upland GW	--	All Analytes are totals	SMW-14	--	--	--	0		0		5		--			
--	Upland GW	--	All Analytes are totals	SMW-15	--	--	--	0		0		--		--			
--	Upland GW	--	All Analytes are totals	SMW-16	--	--	--	0		0		--		--			
--	Upland GW	--	All Analytes are totals	SMW-17	--	--	--	0		0		--		--			
--	Upland GW	--	All Analytes are totals	SMW-18	--	--	--	0		0		--		--			
--	Upland GW	--	All Analytes are totals	MW-10	--	--	--	0		0		10.4		3.57			
--	Upland GW	--	All Analytes are totals	MW-11	--	--	--	0		0		0		0			
--	Upland GW	--	All Analytes are totals	MW-13	--	--	--	0		0		0		0			
--	Upland GW	--	All Analytes are totals	MW-14	--	--	--	0		0		15.7		9.39			
--	Upland GW	--	All Analytes are totals	GP-301	--	--	--	0		0		--		--			
--	Upland GW	--	All Analytes are totals	GP-303	--	--	--	0		0		1820		173			
--	Upland GW	--	All Analytes are totals	GP-307	--	--	--	0		0		8.95		9.1			
--	Upland GW	--	All Analytes are totals	GP-311	--	--	--	0		0		13.8		18.1			
--	Upland GW	--	All Analytes are totals	GP-313	--	--	--	0		0		45.4		30.8			
--	Upland GW	--	All Analytes are totals	GP-316	--	--	--	0		0		4720		694			
--	Upland GW	--	All Analytes are totals	GP-321	--	--	--	0		0		403		95.2			
--	Upland GW	--	All Analytes are totals	GP-322	--	--	--	0		0		12800		2340			
--	Upland GW	--	All Analytes are totals	GP-323	--	--	--	0		0		4.95		7.56			
--	Upland GW	--	All Analytes are totals	GP-325	--	--	--	0		0		33.8		31.4			
--	Upland GW	--	All Analytes are totals	GP-327	--	--	--	0		0		11		11.4			
--	Upland GW	--	All Analytes are totals	GP-328	--	--	--	0		0		7.35		11.1			
--	Upland GW	--	All Analytes are totals	GP-330	--	--	--	0		0		51.4		73			
--	Upland GW	--	All Analytes are totals	GP-336	--	--	--	0		0		0		2.41			
--	Upland GW	--	All Analytes are totals	GP-338	--	--	--	0		0		4.7		238			
--	Upland GW	--	All Analytes are totals	GP-341	--	--	--	0		0		130		49			
--	Upland GW	--	All Analytes are totals	GP-345	--	--	--	0		0		29		60.1			

Table C3.9-1. Compilation of COI Concentrations in Upland Groundwater, Transition Zone Water, and Sediment – Gunderson.

Discharge Zone	Sample Matrix	Method	Filtration	Sample Location	Upper depth (ft-upland GW; cm-Sediment and TZW)	Lower depth (ft-upland GW; cm-Sediment and TZW)	Sample Date	1,1,1-Trichloroethane		1,1-Dichloroethene		Lead		Chromium		Arsenic	
								Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units	Concentration	Units
--	Upland GW	--	All Analytes are totals	GP-346	--	--		0		0		12.7		27.5			
--	Upland GW	--	All Analytes are totals	GP-347	--	--		0		0		524		91.5			
--	Upland GW	--	All Analytes are totals	GP-348	--	--		0		0		61.6		65.4			
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-C436-A	0	30	10/07/04										
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-C440-A	0	30	10/06/04										
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-C441-A1	0	30	10/06/04										
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G436	0	26	08/27/04										
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G437	0	27	10/22/04										
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G439	0	26	09/09/04	0.11 U	µg/kg	0.15 U	µg/kg	25.3	mg/kg	27.1	mg/kg	3.69	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G440	0	26	08/31/04										
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G441	0	27	08/25/04	0.11 U	µg/kg	0.16 U	µg/kg	15.5	mg/kg	32.6	mg/kg	3.7	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-G445	0	25	08/25/04	0.099 U	µg/kg	0.14 U	µg/kg	454	mg/kg	60.4	mg/kg	34	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW2-GBT025	0	10	12/12/05	0.12 U	µg/kg	0.17 U	µg/kg	14 J	mg/kg	32 J	mg/kg	3.81	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW3-G716	0	30	12/04/07										
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LW3-G717	0	29	12/04/07										
Groundwater Discharge Zone	Sediment	--	--	LWG0108R001SDS015C00	0	15	10/22/02	2 UJ	µg/kg	0.18 U	µg/kg	19 J	mg/kg	36.2	mg/kg	2.3	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-GN1E	0	21	12/02/05	0.12 U	µg/kg	0.08	µg/kg	35.6	mg/kg	36.9	mg/kg	3.35	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-GN2E	0	26	12/02/05	0.11 U	µg/kg	0.075	µg/kg	28 T	mg/kg	40 T	mg/kg	3.25 T	mg/kg
Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-GN5A	0	27	12/02/05	0.12 U	µg/kg	0.08	µg/kg	62.8	mg/kg	56.8	mg/kg	8.12	mg/kg
Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-GN5A-2	0	27	12/02/05	0.14 U	µg/kg	0.095	µg/kg	55.1	mg/kg	34.6	mg/kg	5.55	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	LWG2-PG-R2GN1	0	27	12/02/05	0.11 U	µg/kg	0.16 U	µg/kg	14.6	mg/kg	40	mg/kg	2.97	mg/kg
Low-To-No Groundwater Discharge Zone	Sediment	--	--	WR-WI98SD1370000CC	0	10	09/24/97							16 T	mg/kg	37.1 T	mg/kg
Low-To-No Groundwater Discharge Zone	TZW	Peeper	--	LWG2-P-GN1E	0	38	11/28/05	0.12 U	µg/L	0.13 U	µg/L	1.53 U	µg/L	1.74	µg/L	5.9 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Peeper	--	LWG2-P-GN2E	0	38	11/28/05	0.12 U	µg/L	0.13 U	µg/L	1.11 U	µg/L	1	µg/L	6.87 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Peeper	--	LWG2-P-GN3A	0	38	11/28/05	0.12 U	µg/L	0.13 U	µg/L	0.69 U	µg/L	0.39 U	µg/L	0.89 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Peeper	--	LWG2-P-GN4B	0	38	11/29/05	0.12 U	µg/L	0.13 U	µg/L	0.64 U	µg/L	0.29 U	µg/L	0.4 J	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Peeper	--	LWG2-P-R2GN1	0	38	11/28/05	0.12 U	µg/L	0.13 U	µg/L	0.13 UT	µg/L	0.7 UT	µg/L	14.3 JT	µg/L
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-GN4A	30	30	10/21/05	0.12 U	µg/L	0.45 J	µg/L	6.1	µg/L	5.05	µg/L	9.64	µg/L
Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-GN4A-Filt	30	30	10/21/05							0.01 U	µg/L	0.47 U	µg/L
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T30-GN5A	30	30	10/21/05	0.12 J	µg/L	4.2	µg/L	19.3 T	µg/L	4.73 T	µg/L	2.28 T	µg/L
Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T30-GN5A-Filt	30	30	10/21/05							0.07 U	µg/L	0.53 U	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-GN1E	150	150		0.12 U	µg/L	0.13 U	µg/L	24.5	µg/L	19.5	µg/L	8.33	µg/L
Low-To-No Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T90-GN1E-Filt	150	150	10/22/05							0.05 U	µg/L	0.28 U	µg/L
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-GN4A	90	90	10/21/05	1.5	µg/L	8	µg/L	6.73	µg/L	4.45	µg/L	6.92	µg/L
Groundwater Discharge Zone	TZW	Trident	Unfiltered	LWG2-T90-GN5A	150	150	10/21/05	32	µg/L	260	µg/L	8.44	µg/L	2.14	µg/L	1.36	µg/L
Groundwater Discharge Zone	TZW	Trident	Filtered	LWG2-T90-GN5A-Filt	150	150	10/21/05							0.14	µg/L	0.29 U	µg/L

Notes:

-- Indicates no data are available

0 values are believed to be ND; not specifically defined in data source.

COI - contaminant of interest

GW - groundwater

ND - Analyte was analyzed for but not detected, no information on detection limits available.

TZW - transition zone water

Reason codes for qualifiers:

J - The associated numerical value is an estimated quantity.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Reason codes for descriptors:

T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table C4.0-1. Major Ion Composition and Metals of Interest (Arsenic, Barium, Iron, and Manganese) in TZW.

Upland Site	Flow Zone	LocationID	Sample Method	Oxidation-Reduction Potential	pH			Major Anions												Major Cations															
					standard units			Alkalinity mg/L as CaCO3			Chloride mg/L			Sulfate mg/L			Sodium µg/L			Potassium µg/L															
				mV	Unfiltered	Filtered	Peep	Unfiltered	Filtered	Peep	Unfiltered	Filtered	Peep	Unfiltered	Filtered	Peep	Unfiltered	Concen-	Detect	Concen-	Detect	Concen-	Detect	Concen-	Detect	Concen-	Detect	Concen-	Detect						
				Unfiltered	Detect	Value	Flag	Detect	Value	Flag	Detect	Value	Flag	Detect	Value	Flag	Detect	Value	Flag	Detect	Value	Flag	Detect	Value	Flag	Detect	Value	Flag	Detect	Value	Flag				
ARCO	Groundwater Discharge Zone	AR-01-A-TR	Trident	-37 Y				6.39 Y			148 Y			4.2 Y			3.4 Y	11000 Y		9850 Y	3590 Y			3600 Y											
		AR-02-A-TR	Trident	-99 Y				6.67 Y																12200 Y		12500 Y	3150 Y			3650 Y					
	Low-To-No Groundwater Discharge Zone	AR-04-B-PR	Peep					7.13 Y			93 Y			5.6 Y			0.45 N								12600 Y			2970 Y							
		LWP1-ARC02B	Peep			6.94 Y				124 Y			4.7 Y			0.15 N			0.4 Y						580 Y			133 Y							
		LWP1-ARC03B	Peep			6.72 Y				502 Y			5.7 Y			0.18 N			0.45 N						1270 Y			375 Y							
		LWP1-ARC06B-1	Peep			6.805 Y			7.25 Y			102 Y			4.7 Y			0.15 N			0.45 N					20300 Y		20900 Y	5050 Y			5420 Y			
		Trident								332 Y															19000 Y			4560 Y							
		R2-AR-01-TR	Trident	-98 Y					6.41 Y			357 Y			4.2 Y			0.12 N			0.15000 Y			14700 Y	3770 Y		4510 Y								
		R2-AR-02-TR	Trident	-90 Y					6.67 Y			308 Y			8 Y			0.5 Y			17400 Y			18360 Y	3660 Y		4570 Y								
		R2-AR-03-TR	Trident	-20 Y					7.21 Y			60 Y			5.5 Y			0.4 Y			5630 Y			5710 Y	1220 Y		1570 Y								
		R2-AR-04-TR	Trident	-90 Y					6.98 Y			164 Y			6.4 Y			3.2 Y			13400 Y			13700 Y	3030 Y		3380 Y								
Arkema - Acid Plant	Low-To-No Groundwater Discharge Zone	LWP1-AP04D	Trident			7.34 Y				585 Y			1150 Y			0.9 N								612000 Y			6470 Y								
	Nearshore Groundwater Discharge Zone	AP-02-A-TR	Trident	-120 Y				6.63 Y			334 Y			62.7 Y			0.7 Y	19500 N							20800 Y	3570 Y		3850 Y							
		AP-03-A-TR	Trident	-120 Y				6.48 Y			584 Y			1740 Y			1.2 N	356000 Y							393000 Y	10900 Y		11800 Y							
	Variable Groundwater Discharge Zone (Lower Rate)	AP-02-D-TR	Trident	-105 Y				6.36 Y			480 Y			913 Y			0.3 N								590000 Y			7420 Y							
		AP-03-D-TR	Trident			5.99 Y				34 Y			1000 Y			942 Y																			
		AP-04-C-PR	Peep			7.42 Y				124 Y			1.6 Y			0.4 Y								3360 Y			540 Y								
		LWP1-AP03B-1	Trident	6.3 Y				132 Y			3040 Y			27.4 Y				179000 Y							7710 Y										
		LWP1-AP04B	Trident	7.79 Y				1300 Y			2370 Y			70.1 Y				590000 Y							6140 Y										
		R2-AP-01-PR	Peep			8.1 Y				658 Y			11.1 Y			0.5 Y								8220 Y			1760 Y								
		R2-AP-02-TR	Trident	-112 Y			7.13 Y			1430 Y			14500 Y			264 Y	988000 Y							9320000 Y	22400 Y		19800 Y								
Arkema - Chlorate Plant	Low-To-No Groundwater Discharge Zone	CP-09-A-TR	Trident	38 Y			7.19 Y			359 Y			8660 Y			124 Y	6420000 Y							6920000 Y	11000 Y		12200 Y								
		CP-09-D-PR	Peep			6.96 Y			492 Y			29100 Y			47 Y									25000000 Y			47800 Y								
		LWP1-CP08D-1	Peep			6.44 Y		6.37 Y	540 Y		520 Y	89700 Y		88500 Y	45 N		45 N	56380000 Y							58650000 Y	88500 Y		90900 Y							
	Nearshore Groundwater Discharge Zone	CP-06-A-TR	Trident	-96 Y			7.27 Y			486 Y			1220 Y			26.6 Y	1290000 Y							1130000 Y	6960 Y		7330 Y								
		CP-07-A-TR	Trident	30 Y			7.26 Y			810 Y			9280 Y			278 Y	8250000 Y							7720000 Y	16400 Y		15300 Y								
		CP-07-B-TR	Trident	5 Y			6.82 Y			620 Y			12700 Y			292 Y	10920000 Y							10230000 Y	23000 Y		22500 Y								
		CP-08-B-TR	Trident	61 Y			7 Y			502 Y			9910 Y			268 Y	8810000 Y							8670000 Y	12300 Y		11900 Y								
		LWP1-CP10A	Trident	7.01 Y		7.04 Y	371 Y		374 Y	32000 Y		35600 Y	18 N		18 N	29500000 Y							29070000 Y	27100 Y		26600 Y									
	Variable Groundwater Discharge Zone (Lower Rate)	CP-07-D-PR	Peep			6.76 Y				289 Y			51700 Y			485 Y					</td														

Table C4.0-1. Major Ion Composition and Metals of Interest (Arsenic, Barium, Iron, and Manganese) in TZW.

Upland Site	Flow Zone	LocationID	Sample Method	Oxidation-Reduction Potential	pH				Major Anions												Major Cations									
				mV	standard units				Alkalinity mg/L as CaCO ₃				Chloride mg/L				Sulfate mg/L				Sodium µg/L				Potassium µg/L					
				Unfiltered	Filtered	Peeper	Unfiltered	Concen-	Filtered	Peeper	Unfiltered	Concen-	Filtered	Peeper	Unfiltered	Concen-	Filtered	Peeper	Unfiltered	Concen-	Detect	Concen-	Detect	Concen-	Detect	Concen-	Detect			
				Value	Detect Flag	Value	Detect Flag	Concen-	Value	Detect Flag	Concen-	Value	Detect Flag	Concen-	Value	Detect Flag	Concen-	Value	Detect Flag	Concen-	Detect	Concen-	Detect	Concen-	Detect	Concen-	Detect			
Gasco	Low-To-No Groundwater Discharge Zone	GS-01-B-PR	Peeper																											
		GS-02-A-TR	Trident	-152 Y				5.6 Y			66 Y			2.8 Y			15.9 Y	48300 Y		47000 Y	1160 Y		5210 Y					1360 Y		
		GS-07-D-PR	Peeper			6.97 Y			337 Y			4.2 Y			0.2 Y			12200 Y					2940 Y							
		GS-08-A-TR	Trident	-106 Y				6.58 Y			676 Y			5.55 Y			0.1 N	23100 Y		23200 Y	5640 Y		5440 Y							
		WLCGSG07GSB1	PushProbe														9360 Y		12700 Y	1710 Y		5990 Y								
		WLCGSG07GSB2	PushProbe														9520 Y		19400 Y	1490 Y		11400 Y								
		WLCGSG07GSB3	PushProbe														9290 Y		28000 Y	2140 Y		3320 Y								
		WLCGSG07GSB4	PushProbe														10300 Y		13700 Y	2850 Y		30200 Y								
		WLCGSG07GSB5	PushProbe														14200 Y					6400 Y								
		WLCGSG07GSB6	PushProbe														23500 Y					6920 Y								
		WLCGSG07GSB7	PushProbe														9490 Y													
	Offshore Groundwater Discharge Zone	GS-08-D-TR	Trident	-88 Y				6.56 Y			223 Y			6.3 Y			0.1 N	13800 Y		14200 Y	2960 Y		3700 Y							
		WLCSLH01GP41	PushProbe	189.2 Y				6.74 Y																						
		WLCSLH01GP49	PushProbe	285.8 Y				6.7 Y																						
		WLCSLH01GP72	PushProbe	185.2 Y				6.7 Y																						
		WLCSLH01GP73	PushProbe	218.8 Y				6.6 Y																						
		WLCGSG07GSC1	PushProbe																										20500 Y	
		WLCGSG07GSC3	PushProbe																										8210 Y	
		WLCGSG07GSC4	PushProbe																										6290 Y	
		WLCGSG07GSC5	PushProbe																										6170 Y	
		WLCGSG07GSC6	PushProbe																										5270 Y	
		WLCGSG07GSC7	PushProbe																										5820 Y	
		WLCGSG07GSD1	PushProbe																										9480 Y	
		WLCGSG07GSD2	PushProbe																										5650 Y	
		WLCGSG07GSD3	PushProbe																										8360 Y	
		WLCGSG07GSD4	PushProbe																										7090 Y	
	Variable Nearshore Groundwater Discharge Zone	GS-07-B-TR	Trident	-52 Y				6.5 Y			168 Y			5.7 Y			1.1 Y													3580 Y
Gunderson	Groundwater Discharge Zone	GN-04-A-TR	Trident	-91 Y				6.61 Y			306 Y			10.9 Y			0.12 N	16400 Y		18200 Y	3250 Y		3870 Y							
		GN-05-A-TR	Trident	-49 Y				6.47 Y			157 Y			15.9 Y			0.6 Y	14800 Y		15600 Y	3300 Y		3470 Y							
	Low-To-No Groundwater Discharge Zone	GN-01-E-PR	Peeper					6.81 Y			750 Y			7.4 Y			0.6 Y													8000 Y
		GN-02-E-PR	Peeper					6.9 Y			519 Y			7.5 Y			0.19 Y													5320 Y
		GN-03-A-PR	Peeper					6.46 Y			40 Y			2 Y			0.14 Y													445 Y
		GN-04-B-PR	Peeper					6.85 Y			60 Y			0.7 Y			0.06 N													199 Y
		R2-GN-01-PR	Peeper					6.73 Y			756 Y			8.2 Y			0.3 N													7560 Y
Kinder Morgan	Groundwater Discharge Zone	KM-08-A-TR	Trident	-47 Y				7.26 Y			280 Y			9.9 Y			3.1 Y	44600 Y		43700 Y	3110 Y		3050 Y							
		R2-KM-01-TR	Trident	-47 Y				6.94 Y			240 Y			4.6 Y			2.6 Y	14900 Y		18800 Y	2580 Y		3410 Y							
	Low-To-No Groundwater Discharge Zone	KM-06-A-PR	Peeper					7.24 Y			114 Y			1.5 Y			0.9 Y													1340 N
		KM-10-A-PR	Peeper					7.72 Y			85 Y																			

Table C4.0-1. Major Ion Composition and Metals of Interest (Arsenic, Barium, Iron, and Manganese) in TZW

Upland Site	Flow Zone	Location ID	Sample Method	Oxidation-Reduction Potential		pH				Major Anions						Major Cations											
										Alkalinity mg/L as CaCO3			Chloride mg/L			Sulfate mg/L			Sodium µg/L			Potassium µg/L					
				Unfiltered		Filtered	Peep	Unfiltered	Filtered	Peep	Unfiltered	Filtered	Peep	Unfiltered	Filtered	Peep	Unfiltered	Filtered	Peep	Unfiltered	Filtered	Peep	Unfiltered	Filtered	Peep	Unfiltered	
				Detect	Value Flag	Detect	Value Flag	Detect	Concen- tration	Detect	Concen- tration	Detect	Concen- tration	Detect	Concen- tration	Detect	Concen- tration	Detect	Concen- tration	Detect	Concen- tration	Detect	Concen- tration	Detect	Concen- tration	Detect	
Siltronix	Far Offshore Groundwater Discharge Zone	WLCSLH01GP65	PushProbe	121.2 Y				6.63 Y																			
		WLCSLH01GP74	PushProbe	164.9 Y				6.77 Y																			
	Low-To-No Groundwater Discharge Zone	WLCGSG07GSC9	PushProbe																								
		WLCGSG07GSD5	PushProbe																								
		SL-01-A-TR	Trident	-108 Y				6.47 Y			492 Y				10.5 Y				0.1 N	21600 Y			21800 Y	5030 Y		5120 Y	
		SL-02-A-TR	Trident	-89 Y				6.67 Y			153 Y				8 Y				2.5 Y	12300 Y			12700 Y	2290 Y		2220 Y	
		SL-03-A-TR	Trident	-49 Y				6.75 Y			109 Y				6.7 Y				2.8 Y	8570 Y			11400 Y	1580 Y		2130 Y	
	Nearshore Groundwater Discharge Zone	SL-05-A-TR	Trident	-104 Y				6.69 Y			324 Y				7.5 Y				0.3 Y	15100 Y			17200 Y	3300 Y		3790 Y	
		WLCSLH01GP47	PushProbe	191.3 Y				6.54 Y																			
		SL-04-A-TR	Trident	-89 Y				6.69 Y			111 Y				5.5 Y				3.6 Y	11500 Y			12700 Y	2510 Y		2750 Y	
	Offshore Groundwater Discharge Zone	WLCSLH01GP46	PushProbe	194.8 Y				6.57 Y																			
		SL-01-E-PR	Peep					7.77 Y			426 Y				14.3 Y				0.1 N				14000 Y			3260 Y	
		SL-02-C-PR	Peep					7 Y			330 Y				5 Y				0.2 Y				13200 Y			2960 Y	
		SL-02-E-PR	Peep					6.96 Y			350 Y				27.9 Y				0.2 Y				14600 Y			3850 Y	
		SL-03-C-PR	Peep					6.93 Y			317 Y				0.04 N				0.1 Y				12200 Y			3370 Y	
		SL-03-F-PR	Peep					6.82 Y			390 Y				25.5 Y				0.4 Y				17900 Y			4080 Y	
		SL-04-F-PR	Peep					6.79 Y			352 Y				14.7 Y				0.2 Y				12900 Y			2930 Y	
		WLCSLH01GP38	PushProbe	166.4 Y				6.43 Y																			
		WLCSLH01GP39	PushProbe	159.6 Y				6.58 Y																			
		WLCSLH01GP40	PushProbe	143.3 Y				7.2 Y																			
		WLCSLH01GP42	PushProbe	105.4 Y				6.72 Y																			
		WLCSLH01GP43	PushProbe	144.2 Y				6.47 Y																			
		WLCSLH01GP44	PushProbe	163.2 Y				6.8 Y																			
		WLCSLH01GP45	PushProbe	220.6 Y				6.17 Y																			
		WLCSLH01GP48	PushProbe	144.2 Y				6.54 Y																			
		WLCSLH01GP50	PushProbe	70.7 Y				7.76 Y																			
		WLCSLH01GP51	PushProbe	243 Y				6.73 Y																			
		WLCSLH01GP52	PushProbe	181.8 Y				6.36 Y																			
		WLCSLH01GP53	PushProbe	121.5 Y				6.62 Y																			
		WLCSLH01GP54	PushProbe	220.5 Y				6.48 Y																			
		WLCSLH01GP55	PushProbe	268.8 Y				6.41 Y																			
		WLCSLH01GP56	PushProbe	136.9 Y				6.44 Y																			
		WLCSLH01GP57	PushProbe	147.9 Y				6.44 Y																			
		WLCSLH01GP58	PushProbe	121.5 Y				6.62 Y																			
		WLCSLH01GP61	PushProbe	232.6 Y				6.56 Y																			
		WLCSLH01GP62	PushProbe	160.4 Y				6.81 Y																			
		WLCSLH01GP63	PushProbe	299.5 Y				6.56 Y																			
		WLCSLH01GP64	PushProbe	164 Y				6.45 Y																			
		WLCSLH01GP66	PushProbe	298.9 Y				6.87 Y																			
		WLCSLH01GP67	PushProbe	319.1 Y				6.56 Y																			
		WLCSLH01GP68	PushProbe	184.3 Y				6.45 Y																			
		WLCSLH01GP69	PushProbe	303.2 Y				6.44 Y																			
		WLCSLH01GP70	PushProbe	233.5 Y				6.5 Y																			
		WLCSLH01GP71	PushProbe	123.9 Y				6.63 Y																			
		WLCSLH01GP75	PushProbe	170.1 Y				6.47 Y																			
		WLCSLH01GP76	PushProbe	343.8 Y				6.65 Y																			
		WLCSLH01GP80	PushProbe	355.6 Y				6.96 Y																			
		WLCSLH01GP81	PushProbe	162.5 Y				6.47 Y																			
		WLCSLH01GP82	PushProbe	319.1 Y				6.52 Y																			
		WLCSLH01GP84	PushProbe	176 Y				6.71 Y																			
		WLCGSG07GSB8	PushProbe																								
		WLCGSG07GSB9	PushProbe																								
		WLCGSG07GSC8	PushProbe																								
Willbridge	Groundwater Discharge Zone (Higher Flow Rate)			R2-W-02-TR	Trident	-105 Y		6.62 Y			922 Y				13 Y				0.1 N	26800 Y			26900 Y	6650 Y		7150 Y	
	W-09-A-TR	Trident	128 Y		7.35 Y			31 Y				8.1 Y				4.8 Y	8980 Y			9600 Y	1160 Y		1300 Y				
	W-12-A-TR	Trident																									
				-64 Y		6.75 Y			213 Y				9.95 Y				0.1 N				39100 Y			3040 Y			
	Groundwater Discharge Zone (Lower Flow Rate)			W-04-C-PR	Peep		7.63 Y			263 Y				24.7 Y				0.19 Y				43900 Y			3330 N		
	W-06-A-TR	Trident	138 Y		7.33 Y			34 Y				8.3 Y				4.8 Y	9460 Y			9990 Y	1250 Y		1510 Y				
	W-07-C-TR	Trident	75 Y		7.12 Y			44 Y				11.4 Y				4.4 Y	11200 Y			13000 Y	1390 Y		3320 Y				
	W-09-C-PR	Peep			6.74 Y			232 Y				1.65 Y				0.4 N				7360 Y			2370 Y				

Table C4.0-1. Major Ion Composition and Metals of Interest (Arsenic, Barium, Iron, and Manganese) in TZW

Upland Site	Flow Zone	LocationID	Sample Method	Major Cations								Metals																				
				Calcium µg/L			Magnesium µg/L			Arsenic µg/L			Barium µg/L			Iron µg/L			Manganese µg/L													
				Filtered	Peepr	Unfiltered	Filtered																									
				Concen- tration Flag	Detect- tion Flag	Concen- tration Flag	Concen- tration Flag																									
ARCO	Groundwater Discharge Zone	AR-01-A-TR	Trident	51400	Y		39300	Y	11700	Y		10300	Y	4.7	Y		7.2	Y	78.4	Y		114	Y	26600	Y							
		AR-02-A-TR	Trident	36700	Y		40100	Y	20100	Y		22400	Y	14.7	Y		16	Y	58.2	Y		185	Y	45900	Y							
	Low-To-No Groundwater Discharge Zone	AR-04-B-PR	Peepr		76600	Y			25500	Y				2.96	Y				95.3	Y				31600	Y							
		LWP1-ARC02B	Peepr		2590	Y			814	Y				0.2	N										76.9	Y						
		LWP1-ARC03B	Peepr			8845	Y			2665	Y				2	Y									400.5	Y						
		LWP1-ARC06B-1	Peepr		5760	Y			1600	Y		34300	Y	8	Y		8.9	Y								173	Y					
		LWP1-ARC06B-1	Peepr			106000	Y		111000	Y	32700	Y													2330	Y						
		LWP1-ARC06B-1	Trident			84700	Y		4560	Y		16500	Y		1060	Y		10.9	Y		10.8	Y				4340	Y					
		R2-AR-01-TR	Trident	83100	Y			82900	Y	17100	Y		17100	Y	32.3	Y		32	Y	172	Y				193	Y						
		R2-AR-02-TR	Trident	68200	Y			73500	Y	16400	Y		20900	Y	15.6	Y		15.1	Y	123	Y				292	Y						
		R2-AR-03-TR	Trident	13100	Y			13200	Y	5230	Y		5460	Y	0.76	Y		3.06	Y	38.5	Y				94.4	Y						
		R2-AR-04-TR	Trident	30200	Y			32400	Y	10600	Y		11200	Y	15.1	Y		15.9	Y	49.2	Y				61.3	Y						
Arkema - Acid Plant	Low-To-No Groundwater Discharge Zone	LWP1-AP04D	Trident		242000	Y			76100	Y															11800	Y						
		AP-02-A-TR	Trident	84700	Y		104000	Y	24800	Y		28000	Y	27	Y		37.6	Y	120	Y				150	Y	71300	Y					
	Nearshore Groundwater Discharge Zone	AP-03-A-TR	Trident	145000	Y		161000	Y	484000	Y		520000	Y	7.93	Y		7.88	Y	679	Y				782	Y	86000	Y					
		AP-02-D-TR	Trident			135000	Y			48200	Y				2.07	Y				709	Y				109000	Y						
		AP-03-D-TR	Trident																						710	Y						
		AP-04-C-PR	Peepr		8850	Y			3970	Y				0.91	Y				13.6	Y				4730	Y		18600	Y				
		LWP1-AP03B-1	Trident	125000	Y			743000	Y																17300	Y						
		LWP1-AP04B	Trident	281000	Y			382000	Y																4240	Y						
		R2-AP-01-PR	Peepr		9610	Y			91600	Y				0.73	Y				58.2	Y				660	Y		146	Y				
		R2-AP-02-TR	Trident	342000	Y		329000	Y	599000	Y		578000	Y	5.22	Y		5.95	Y	2120	Y				16200	Y	4800	Y	5270	Y			
	Variable Groundwater Discharge Zone (Lower Rate)	CP-09-A-TR	Trident	38100	Y		46600	Y	8240	Y		75900	Y	0.69	N		0.66	N	1430	Y				4390	Y	30.8	Y	1290	Y			
		CP-09-D-PR	Peepr		164000	Y			45200	Y				10.7	Y				2230	Y						252000	Y					
		LWP1-CP08D-1	Peepr		161000	Y																				33500	Y					
		Trident	363000	Y		384000	Y	132000	Y		139000	Y														36000	Y					
		CP-06-A-TR	Trident	6260	Y			7630	Y	2140	Y		2960	Y	0.21	N		1.6	Y	39.8	Y				67	Y	3980	Y				
		CP-07-A-TR	Trident	14800	Y			14300	Y	6430	Y		6210	Y	6.5	Y		5.22	Y	119	Y				98.7	Y	169	Y	173	Y		
		CP-07-B-TR	Trident	22900	Y			22800	Y	9610	Y		9270	Y	0.43	N		0.5	N	785	Y				811	Y	289	Y	1050	Y		
		CP-08-B-TR	Trident	10400	Y			11000	Y	7680	Y		7750	Y	0.55	N		0.72	Y	52	Y				60.3	Y	145	Y	373	Y		
		LWP1-CP10A	Trident	72700	Y			77900	Y	48300	Y		50300	Y													1940	Y				
	Variable Groundwater Discharge Zone (Lower Rate)	CP-07-D-PR	Peepr		119000	Y			75200	Y				0.46	N				570	Y						385	Y		5360	Y		
		LWP1-CP06C	Peepr		127000	Y			40100	Y																9430	Y		10800	Y		
		Trident	690000	Y			681500	Y	278000	Y		280500	Y														10800	Y		11150	Y	
		LWP1-CP07B	Peepr		97100	Y			23700	Y																		6740	Y		125	Y
		Trident	9650	Y			11500	Y	5450	Y		7150	Y															156	Y		280	Y
		R2-CP-01-PR	Peepr		787000	Y					312000	Y				4.09	Y				2670	Y						150000	Y		66200	Y
ExxonMobil	Groundwater Discharge Zone (Lower Flow Rate)	EM-02-C-TR	Trident	31100	Y			9390	Y					16	Y				43.8	Y						23500	Y		2180	Y		
		EM-04-C-TR	Trident	170000	Y			47500	Y			20900	Y				22.7	Y									353	Y		91200	Y	
		EM-06-B-TR	Trident	38000	Y			152000	Y	52000	Y		48200	Y	23.8	Y		24.6	Y	233	Y						306	Y	109000	Y	111000	Y
		Interpreted Groundwater Discharge Zone	EM-01-A-TR			39200	Y	14700	Y			16100	Y	30.9	Y		26.7	Y	64.1	Y						137	Y	40600	Y	50500	Y	
		EM-02-A-TR	Trident	32500	Y			29500	Y	11500	Y		5490	Y	2.73	Y		2.1	Y	50.3	Y						96.5	Y	5020	Y	10900	Y
		EM-03-A-TR	Trident	36400	Y			40700	Y	13900	Y		15700	Y	26.4	Y		28.5	Y	42.3	Y						78.5	Y	17800	Y	27200	Y
	Low-To-No Groundwater Discharge Zone	EM-04-A-TR	Trident	45700	Y			48200	Y	14100	Y		15000	Y	9.63	Y		9.98	Y	84.6	Y						104	Y	26300	Y	26800	Y
		EM-05-A-TR	Trident	73300	Y			75100	Y	25500	Y		26100	Y	6.52	Y		6.57	Y	143	Y						189	Y	42000	Y	42500	Y
		EM-08-A-TR	Trident	51700	Y			50500	Y	16000	Y		15600	Y	23.9	Y		23.2	Y	77.5	Y						33600	Y	33600	Y	3990	Y
		R2-EM-01-TR	Trident	61300	Y			62400	Y	25700	Y		27200	Y	11.3	Y		11	Y	95.5	Y						119	Y	50500	Y	53600	Y
																											4050	Y		4160	Y	

Table C4.0-1. Major Ion Composition and Metals of Interest (Arsenic, Barium, Iron, and Manganese) in TZW.

Upland Site	Flow Zone	LocationID	Sample Method	Major Cations												Metals																				
				Calcium				Magnesium				Arsenic				Barium				Iron				Manganese												
				Concen- tration Flag		Filtered	Peep- er	Unfiltered	Concen- tration Flag	Filtered	Peep- er	Unfiltered																								
				Concen- tration Flag	Detec- tion Flag	Concen- tration Flag	Detec- tion Flag	Concen- tration Flag	Detec- tion Flag	Concen- tration Flag	Detec- tion Flag	Concen- tration Flag	Detec- tion Flag	Concen- tration Flag	Detec- tion Flag	Concen- tration Flag	Detec- tion Flag	Concen- tration Flag	Detec- tion Flag	Concen- tration Flag	Detec- tion Flag	Concen- tration Flag	Detec- tion Flag	Concen- tration Flag	Detec- tion Flag	Concen- tration Flag	Detec- tion Flag									
Gasco	Low-To-No Groundwater Discharge Zone	GS-01-B-PR	Peeker	88700 Y		39200 Y		0.55 Y		54.9 Y		44200 Y		3540 Y		44200 Y		11300 Y		74.1 Y		277 Y		47900 Y		6040 Y		129000 Y		14300 Y		15000 Y				
		GS-02-A-TR	Trident	8700 Y		11500 Y		4740 Y		5840 Y		1.2 Y		1.6 Y		66.6 Y		93.7 Y		6920 Y		168000 Y		501 Y		2810 Y		129000 Y		14300 Y		15000 Y				
		GS-07-D-PR	Peeker	68800 Y		22100 Y										102 Y																				
		GS-08-A-TR	Trident	155000 Y		163000 Y		50000 Y		50900 Y		16.8 Y		17.2 Y		307 Y		342 Y		122000 Y		129000 Y		14300 Y		15000 Y		1110000 Y		1720 Y		24900 Y				
		WLCGSG07GSB1	Push/Probe	9770 Y		39800 Y		3540 Y		28900 Y		0.94 Y		14.2 Y		18.9 Y		717 Y		3260 Y																
		WLCGSG07GSB2	Push/Probe	7690 Y		85300 Y		3960 Y		66900 Y		2.12 Y		31.6 Y		9.44 Y		1530 Y		1240 Y		349000 Y		301 Y		5150 Y		1110000 Y		1720 Y		1320 Y				
		WLCGSG07GSB3	Push/Probe			25100 Y				16900 Y				4.41 Y					326 Y																	
		WLCGSG07GSB4	Push/Probe	17200 Y		213000 Y		5420 Y		223000 Y		2.37 Y		17.9 Y		40.4 Y		4630 Y		10300 Y																
		WLCGSG07GSB5	Push/Probe	58400 Y		87000 Y		16000 Y		43100 Y		5.52 Y		13 Y		102 Y		769 Y		25600 Y		164000 Y		5020 Y		8130 Y		1240 Y		220000 Y		5140 Y		289000 Y		9420 Y
		WLCGSG07GSB6	Push/Probe			58900 Y				40500 Y				13.4 Y					1240 Y																	
		WLCGSG07GSB7	Push/Probe			139000 Y				69500 Y				16.8 Y					1370 Y																	
		GS-08-D-TR	Trident	47500 Y		50500 Y		18700 Y		20500 Y		1.9 Y				91.7 Y																				
		WLCSLH01GP41	Push/Probe																																	
		WLCSLH01GP49	Push/Probe																																	
		WLCSLH01GP72	Push/Probe																																	
		WLCSLH01GP73	Push/Probe																																	
		WLCGSG07GSC1	Push/Probe																																	
		WLCGSG07GSC3	Push/Probe																																	
		WLCGSG07GSC4	Push/Probe																																	
		WLCGSG07GSC5	Push/Probe																																	
		WLCGSG07GSC6	Push/Probe																																	
		WLCGSG07GSC7	Push/Probe																																	
		WLCGSG07GSD1	Push/Probe																																	
		WLCGSG07GSD2	Push/Probe																																	
		WLCGSG07GSD3	Push/Probe																																	
		WLCGSG07GSD4	Push/Probe																																	
		Variable Nearshore Groundwater Discharge Zone	GS-07-B-TR	Trident																																
Gunderson	Groundwater Discharge Zone	GN-04-A-TR	Trident	57900 Y		70300 Y		16100 Y		20500 Y		9.42 Y		9.64 Y		68.6 Y		159 Y		40700 Y		55500 Y		3330 Y		3980 Y		1110000 Y		1720 Y		24900 Y				
		GN-05-A-TR	Trident	30900 Y		34900 Y		16200 Y		17500 Y		1.53 Y		2.28 Y		70.8 Y		116 Y		27000 Y		34000 Y		1010 Y		1380 Y		129000 Y		14300 Y		15000 Y				
		GN-01-E-PR	Peeker	137000 Y																																

Table C4.0-1. Major Ion Composition and Metals of Interest (Arsenic, Barium, Iron, and Manganese) in TZW

Upland Site	Flow Zone	LocationID	Sample Method	Major Cations								Metals								Manganese				
				Calcium µg/L			Magnesium µg/L			Arsenic µg/L			Barium µg/L			Iron µg/L								
				Filtered	Peeper	Unfiltered	Filtered	Peeper	Unfiltered	Filtered	Peeper	Unfiltered	Filtered	Peeper	Unfiltered	Filtered	Peeper	Unfiltered	Filtered	Peeper	Unfiltered	Filtered	Peeper	
				Concen- tration Flag	Detect- tion Flag	Concen- tration Flag	Concen- tration Flag	Detect- tion Flag	Concen- tration Flag	Concen- tration Flag	Detect- tion Flag													
Siltronic	Far Offshore Groundwater Discharge Zone	WLCSLH01GP65	PushProbe																					
		WLCSLH01GP74	PushProbe																					
		WLCGSG07GSC9	PushProbe			22700 Y				11500 Y				27.8 Y				193 Y				39600 Y		1030 Y
		WLCGSG07GSD5	PushProbe			49700 Y				19200 Y				38.6 Y				67.2 Y				20100 Y		1920 Y
	Low-To-No Groundwater Discharge Zone	SL-01-A-TR	Trident	105000 Y		104000 Y	34000 Y			33900 Y	14.3 Y			12.6 Y	205 Y			226 Y	89100 Y			87200 Y	9020 Y	8960 Y
		SL-02-A-TR	Trident	34000 Y		36700 Y	10300 Y			11200 Y	14.9 Y			15.1 Y	65.6 Y			83.8 Y	28800 Y			31900 Y	3590 Y	3920 Y
		SL-03-A-TR	Trident	19300 Y		34400 Y	6340 Y			11200 Y	5.25 Y			5.19 Y	41.6 Y			90 Y	12400 Y			18500 Y	2480 Y	4800 Y
		SL-05-A-TR	Trident	61100 Y		76900 Y	18300 Y			22800 Y	14.8 Y			15 Y	119 Y			165 Y	51600 Y			62300 Y	7260 Y	9700 Y
	Nearshore Groundwater Discharge Zone	SL-04-A-TR	Trident	27600 Y		31900 Y	9070 Y			10500 Y	4.56 Y			5.12 Y	68 Y			97.8 Y	21000 Y			22300 Y	2040 Y	2500 Y
		WLCSLH01GP47	PushProbe																					
		WLCSLH01GP46	PushProbe																					
	Offshore Groundwater Discharge Zone	SL-01-E-PR	Peeper		105000 Y					31200 Y				11 Y				151 Y				77200 Y		10100 Y
		SL-02-C-PR	Peeper		81700 Y					25500 Y				12.5 Y				122 Y				59400 Y		8140 Y
		SL-02-E-PR	Peeper		87000 Y					32500 Y				4.67 Y				112 Y				56600 Y		5430 Y
		SL-03-C-PR	Peeper		70100 Y					22100 Y				10 Y				111 Y				52800 Y		6400 Y
		SL-03-F-PR	Peeper		88800 Y					38700 Y				11.1 Y				137 Y				76200 Y		6430 Y
		SL-04-F-PR	Peeper		85100 Y					30300 Y				5.76 Y				128 Y				80100 Y		5570 Y
		WLCSLH01GP38	PushProbe																					
		WLCSLH01GP39	PushProbe																					
		WLCSLH01GP40	PushProbe																					
		WLCSLH01GP42	PushProbe																					
		WLCSLH01GP43	PushProbe																					
		WLCSLH01GP44	PushProbe																					
		WLCSLH01GP45	PushProbe																					
		WLCSLH01GP48	PushProbe																					
		WLCSLH01GP50	PushProbe																					
		WLCSLH01GP51	PushProbe																					
		WLCSLH01GP52	PushProbe																					
		WLCSLH01GP53	PushProbe																					
		WLCSLH01GP54	PushProbe																					
		WLCSLH01GP55	PushProbe																					
		WLCSLH01GP56	PushProbe																					
		WLCSLH01GP57	PushProbe																					
		WLCSLH01GP58	PushProbe																					
		WLCSLH01GP61	PushProbe																					
		WLCSLH01GP62	PushProbe																					
		WLCSLH01GP63	PushProbe																					
		WLCSLH01GP64	PushProbe																					
		WLCSLH01GP66	PushProbe																					
		WLCSLH01GP67	PushProbe																					
		WLCSLH01GP68	PushProbe																					
		WLCSLH01GP69	PushProbe																					
		WLCSLH01GP70	PushProbe																					
		WLCSLH01GP71	PushProbe																					
		WLCSLH01GP75	PushProbe																					
		WLCSLH01GP76	PushProbe																					
		WLCSLH01GP80	PushProbe																					
		WLCSLH01GP81	PushProbe																					
		WLCSLH01GP82	PushProbe																					
		WLCSLH01GP84	PushProbe																					
		WLCGSG07GSB8	PushProbe																					
		WLCGSG07GSB9	PushProbe																					
		WLCGSG07GSC8	PushProbe																					
Willbridge	Groundwater Discharge Zone (Higher Flow Rate)	R2-W-02-TR	Trident	229000 Y		227000 Y	68900 Y			69900 Y	27 Y			24.9 Y	246 Y			342 Y	113000 Y			118000 Y	12500 Y	12800 Y
		W-09-A-TR	Trident	6690 Y		7830 Y	2410 Y			2970 Y	0.55 Y			0.89 Y	8.5 Y			25.1 Y	91.1 Y			3120 Y	43.6 Y	111 Y
		W-12-A-TR	Trident	35700 Y			13900 Y							51.8 Y				48.5 Y				35100 Y		2560 Y
	Groundwater Discharge Zone (Lower Flow Rate)	W-04-C-PR	Peeper		50000 Y					13900 Y				14.7 Y				67.5 Y				25300 Y		3080 Y
		W-06-A-TR	Trident	6990 Y		8230 Y	2570 Y			3420 Y	0.56 Y			1.1 Y	10.3 Y			37 Y	116 Y			4970 Y	88.8 Y	167 Y
		W-07-C-TR	Trident	8170 Y		17400 Y	3030 Y			12500 Y	1.92 Y			5.48 Y	17.6 Y			300 Y	392 Y			58100 Y	184 Y	1240 Y
		W-09-C-PR	Peeper		53900 Y					16600 Y				7.22 Y				58.3 Y				32800 Y		3710 Y

Table C4.0-2. Summary Values for Available Arsenic, Barium, Manganese, and Major Ion Data for Upland Groundwater.

	Arsenic (mg/L)	Barium (mg/L)	Manganese (mg/L)	Iron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Magnesium (mg/L)	pH (s.u.)	Potassium (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	Alkalinity (mg/L as CaCO ₃)
All Sites												
# of Data Points	933	509	130	60	87	146	124	111	87	114	109	67
% Detected	82%	100%	100%	95%	100%	99%	99%	100%	100%	95%	100%	97%
Min	0	0	2.73E-04	0	1.39	0	0	5.76	0.488	0	0	0
Max	0.897	6.84	87	457	1550	1.64E+05	484	11.6	78.4	7650	3500	7230
Average	0.0221	0.183	5.55	48.3	198	2730	73.3	6.76	15	312	272	642
Kinder Morgan												
# of Data Points	16	16	--	--	--	--	--	--	--	--	--	--
% Detected	94%	100%	--	--	--	--	--	--	--	--	--	--
Min	0	9.07E-03	--	--	--	--	--	--	--	--	--	--
Max	0.0896	0.182	--	--	--	--	--	--	--	--	--	--
Average	0.0213	0.0791	--	--	--	--	--	--	--	--	--	--
ARCO												
# of Data Points	90	16	--	--	--	--	--	--	--	--	--	--
% Detected	76%	88%	--	--	--	--	--	--	--	--	--	--
Min	0	0.0151	--	--	--	--	--	--	--	--	--	--
Max	0.0574	0.441	--	--	--	--	--	--	--	--	--	--
Average	6.69E-03	0.102	--	--	--	--	--	--	--	--	--	--
ExxonMobil												
# of Data Points	135	--	--	--	--	--	--	--	--	--	--	--
% Detected	65%	--	--	--	--	--	--	--	--	--	--	--
Min	0	--	--	--	--	--	--	--	--	--	--	--
Max	0.067	--	--	--	--	--	--	--	--	--	--	--
Average	8.63E-03	--	--	--	--	--	--	--	--	--	--	--
Arkema Acid Plant and Chlorate Plant												
# of Data Points	26	--	39	13	27	66	27	17	27	27	38	38
% Detected	19%	--	100%	77%	100%	100%	100%	100%	100%	100%	100%	95%
Min	0	--	0.0633	0	2.81	5.36	2.28	6.04	1.15	18.7	0	0
Max	0.0296	--	87	12.7	1140	1.64E+05	484	10.4	78.4	3960	3500	7230
Average	3.23E-03	--	9.11	4.18	239	5520	148	7.42	24.4	706	531	850
Rhone Poulen												
# of Data Points	118	--	30	--	30	27	30	37	30	30	27	27
% Detected	85%	--	100%	--	100%	100%	100%	100%	100%	100%	100%	100%
Min	0	--	2.73E-04	--	1.39	3.6	0.0171	5.76	0.488	10	0.37	87
Max	0.295	--	31.2	--	1550	1.55E+04	426	11.6	73.7	7650	232	1480
Average	0.0155	--	5.03	--	214	1080	70.6	6.66	10.5	472	63.2	373
Siltronics												
# of Data Points	52	26	61	47	15	38	52	57	15	42	29	2
% Detected	40%	100%	100%	100%	100%	97%	98%	100%	100%	86%	100%	100%
Min	0	0.0348	0.14	4.36	50.6	0	0	6.21	1.34	0	0.26	330
Max	0.0607	1.08	28.9	457	282	1000	152	7.85	30.3	110	399	334
Average	7.67E-03	0.234	3.54	60.5	141	72.8	47.2	6.62	9.32	26.2	261	332

Table C4.0-2. Summary Values for Available Arsenic, Barium, Manganese, and Major Ion Data for Upland Groundwater.

	Arsenic (mg/L)	Barium (mg/L)	Manganese (mg/L)	Iron (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Magnesium (mg/L)	pH (s.u.)	Potassium (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	Alkalinity (mg/L as CaCO ₃)
Gasco												
# of Data Points	45	--	--	--	--	--	--	--	--	--	--	--
% Detected	60%	--	--	--	--	--	--	--	--	--	--	--
Min	0	--	--	--	--	--	--	--	--	--	--	--
Max	0.052	--	--	--	--	--	--	--	--	--	--	--
Average	9.04E-03	--	--	--	--	--	--	--	--	--	--	--
Willbridge												
# of Data Points	451	451	--	--	--	--	--	--	--	--	--	--
% Detected	98%	100%	--	--	--	--	--	--	--	--	--	--
Min	0	0	--	--	--	--	--	--	--	--	--	--
Max	0.897	6.84	--	--	--	--	--	--	--	--	--	--
Average	0.0350	0.187	--	--	--	--	--	--	--	--	--	--
Gundersen												
# of Data Points	--	--	--	--	15	15	15	--	15	15	15	--
% Detected	--	--	--	--	100%	100%	100%	--	100%	100%	100%	--
Min	--	--	--	--	18.4	13.1	6.28	--	3.19	10.9	7.66	--
Max	--	--	--	--	612	825	91.4	--	42.3	554	22.1	--
Average	--	--	--	--	148	182	34.3	--	13.0	86.8	13.0	--

Notes:

-- Indicates that no data are available.

Dissolved data for arsenic, barium, and manganese presented; total concentrations shown for all other analytes.

Exceptions:

Rhone Poulenc total manganese data (n = 30) used instead of dissolved data (n = 3) due to small dissolved sample count.

Siltronix magnesium data compiled from the Round 2 SAP (Integral 2005) is dissolved, not total.

Arkema iron data compiled from the Round 2 SAP (Integral 2005) is dissolved, not total.

Willbridge dissolved arsenic and barium data was not available; total data used.

Table C4.0-3. Summary of Arsenic, Barium, and Manganese Concentrations in Sediment Pore Water Reported in Literature.

Description	Range in Pore Water Concentration ($\mu\text{g/L}$)			Data Reference Source^a
	Arsenic	Barium	Manganese	
Baseline, Swedish Estuary	1.3 to 166	--	--	Smedley and Kinniburgh, 2002
Baseline, clays, Saskatchewan, Canada	3.2 to 99	--	--	Smedley and Kinniburgh, 2002
Baseline, Amazon shelf sediments	up to 300	--	--	Smedley and Kinniburgh, 2002
Mining Contaminated, British Columbia	50-360	--	--	Smedley and Kinniburgh, 2002
Tailings impoundment, Ontario, Canada	300 to 100,000	--	--	Smedley and Kinniburgh, 2002
Wastewater Impacted River Sediments, Belgium	12 to 200	--	--	Leermakers et al., 2005
Lake Sediments (Loch Lomond), Scotland, UK	1.5 to 81	--	~0 to 3,000	Farmer and Lovell, 1986
Subterranean Estuary, Cape Cod, MA	--	0.137 to 381	5.5 to 7,278	Charette and Sholkovitz, 2006
Marine Sediments, various locations	--	13.73 to 48	549 to 16,479	McManus J. et al., 1998
Seasonally Anoxic Lake, UK	--	--	up to 3,600	Hamilton-Taylor et al., 1996
Lake Sediments, Scotland, UK	--	--	~0 to 5,000	Bryant et al., 1997
Contaminated Sediments, Manchester Ship Canal, UK	--	--	~0 to 2,747	Taylor K.G. and Boult S., 2007
Littoral Sediments of Iberian Peninsula, varied uses	--	--	<1 to 12	Blasco et al., 2000
Wastewater Impacted River Sediments, Belgium	--	--	500 to 3,000	Leermakers et al., 2005

Notes:

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Table C4.0-4. Arsenic, Barium, Iron, and Manganese Concentrations ($\mu\text{g/L}$) in Groundwater from Study Area Background Wells Identified by DEQ.

Well ID	Date	Sample Type	Arsenic				Barium				Iron		Manganese	
			Dissolved		Total		Total		Total		Concen-		Total	
			Concen-	Detect	Concen-	Detect	Concen-	Detect	Concen-	Detect	Concen-	Detect	Concen-	Detect
ExxonMobil														
KMW23	2/28/2005	N	--		--		--		--		--		--	
KMW23	5/23/2005	N	--		--		--		--		--		--	
KMW23	8/22/2005	N	--		--		--		--		--		--	
KMW23	12/2/2005	N	4.65	N	4.65	N	--		--		--		--	
KMW23	3/20/2006	N	--		--		--		--		--		--	
KMW23	5/9/2006	N	--		--		--		--		--		--	
KMW23	7/31/2006	N	--		--		--		--		--		--	
KMW23	12/6/2006	N	0.5	N	0.5	N	--		--		--		--	
KMW23	2/27/2007	N	--		--		--		--		--		--	
KMW23	5/21/2007	N	--		--		--		--		--		--	
KMW23	8/27/2007	N	0.332	N	0.332	N	--		--		--		--	
KMW23	12/3/2007	N	--		--		--		--		--		--	
KMW23	2/18/2008	N	--		--		--		--		--		--	
KMW23	5/5/2008	N	--		--		--		--		--		--	
KMW24	2/28/2005	N	--		--		--		--		--		--	
KMW24	5/23/2005	N	--		--		--		--		--		--	
KMW24	8/22/2005	N	--		--		--		--		--		--	
KMW24	12/1/2005	N	4.65	N	4.65	N	--		--		--		--	
KMW24	3/20/2006	N	--		--		--		--		--		--	
KMW24	5/9/2006	N	--		--		--		--		--		--	
KMW24	7/31/2006	N	--		--		--		--		--		--	
KMW24	12/5/2006	N	0.5	N	0.5	N	--		--		--		--	
KMW24	2/27/2007	N	--		--		--		--		--		--	
KMW24	5/21/2007	N	--		--		--		--		--		--	
KMW24	8/27/2007	N	8.56	Y	7.43	Y	--		--		--		--	
KMW24	12/3/2007	N	--		--		--		--		--		--	
KMW24	2/18/2008	N	--		--		--		--		--		--	
KMW24	5/5/2008	N	--		--		--		--		--		--	
KMW24	11/30/2005	Dup	4.65	N	4.65	N	--		--		--		--	
KMW25	2/28/2005	N	--		--		--		--		--		--	
KMW25	5/23/2005	N	--		--		--		--		--		--	
KMW25	8/22/2005	N	--		--		--		--		--		--	
KMW25	12/1/2005	N	4.65	N	4.65	N	--		--		--		--	
KMW25	3/20/2006	N	--		--		--		--		--		--	
KMW25	5/9/2006	N	--		--		--		--		--		--	
KMW25	7/31/2006	N	--		--		--		--		--		--	
KMW25	12/5/2006	N	0.5	N	0.5	N	--		--		--		--	
KMW25	2/27/2007	N	--		--		--		--		--		--	
KMW25	5/21/2007	N	--		--		--		--		--		--	
KMW25	8/27/2007	N	0.332	N	0.332	N	--		--		--		--	
KMW25	12/3/2007	N	--		--		--		--		--		--	
KMW25	2/18/2008	N	--		--		--		--		--		--	
KMW25	5/5/2008	N	--		--		--		--		--		--	
KMW26	2/28/2005	N	--		--		--		--		--		--	
KMW26	5/23/2005	N	--		--		--		--		--		--	
KMW26	8/22/2005	N	--		--		--		--		--		--	
KMW26	12/1/2005	N	4.65	N	4.65	N	--		--		--		--	
KMW26	3/20/2006	N	--		--		--		--		--		--	
KMW26	5/9/2006	N	--		--		--		--		--		--	
KMW26	7/31/2006	N	--		--		--		--		--		--	
KMW26	12/5/2006	N	1.79	Y	2.19	Y	--		--		--		--	
KMW26	5/21/2007	N	--		--		--		--		--		--	
KMW26	8/27/2007	N	--		2.48	Y	--		--		--		--	
KMW26	12/3/2007	N	--		--		--		--		--		--	
KMW26	2/18/2008	N	--		--		--		--		--		--	
KMW26	5/5/2008	N	--		--		--		--		--		--	
KMW27	2/28/2005	N	--		--		--		--		--		--	

Table C4.0-4. Arsenic, Barium, Iron, and Manganese Concentrations ($\mu\text{g/L}$) in Groundwater from Study Area Background Wells Identified by DEQ.

Well ID	Date	Sample Type	Arsenic				Barium				Iron		Manganese	
			Dissolved		Total		Total		Total		Concen-		Total	
			Concen-	Detect	Concen-	Detect	Concen-	Detect	Concen-	Detect	Concen-	Detect	Concen-	Detect
KMW27	5/23/2005	N	--	--	--	--	--	--	--	--	--	--	--	--
KMW27	8/22/2005	N	--	--	--	--	--	--	--	--	--	--	--	--
KMW27	11/29/2005	N	--	--	--	--	--	--	--	--	--	--	--	--
KMW27	3/20/2006	N	--	--	--	--	--	--	--	--	--	--	--	--
KMW27	5/9/2006	N	--	--	--	--	--	--	--	--	--	--	--	--
KMW27	7/31/2006	N	--	--	--	--	--	--	--	--	--	--	--	--
KMW27	12/4/2006	N	--	--	--	--	--	--	--	--	--	--	--	--
KMW27	2/27/2007	N	--	--	--	--	--	--	--	--	--	--	--	--
KMW27	5/21/2007	N	--	--	--	--	--	--	--	--	--	--	--	--
KMW27	8/27/2007	N	--	--	--	--	--	--	--	--	--	--	--	--
KMW27	12/3/2007	N	--	--	--	--	--	--	--	--	--	--	--	--
KMW27	2/18/2008	N	--	--	--	--	--	--	--	--	--	--	--	--
KMW27	5/5/2008	N	--	--	--	--	--	--	--	--	--	--	--	--
Greenway Recycling														
MW-4	11/22/2006	n/a	--	--	0.5	N	27.5	Y	--	--	--	--	--	--
MW-4	3/12/2007	n/a	--	--	0.5	N	25.6	Y	--	--	--	--	--	--
MW-4	5/24/2007	n/a	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	8/23/2007	n/a	--	--	0.5	N	27.6	Y	--	--	--	--	--	--
EOSM														
BL-MW-3	10/1/1993	n/a	--	--	25	N	--	--	--	--	--	--	--	--
BL-MW-3	2/1/1995	n/a	--	--	25	N	--	--	--	--	--	--	--	--
BL-MW-3	4/1/1996	n/a	--	--	8	Y	--	--	--	--	--	--	--	--
BL-MW-3	10/1/1996	n/a	--	--	4	Y	--	--	--	--	506	Y	--	--
BL-MW-3	4/1/1999	n/a	--	--	2	Y	--	--	--	--	608	Y	--	--
BL-MW-3	7/1/1999	n/a	--	--	4.9	Y	--	--	--	--	57	Y	--	--
BL-MW-3	10/1/1999	n/a	--	--	3.6	Y	--	--	--	--	572	Y	--	--
BL-MW-3	12/1/2005	n/a	--	--	--	--	--	--	--	--	520	Y	--	--
BL-MW-4	10/1/1993	n/a	--	--	92	Y	--	--	--	--	--	--	--	--
BL-MW-4	2/1/1995	n/a	--	--	25	N	--	--	--	--	--	--	--	--
BL-MW-4	4/1/1996	n/a	--	--	2.5	N	--	--	--	--	--	--	--	--
BL-MW-4	10/1/1996	n/a	--	--	10.4	Y	--	--	--	--	7850	Y	--	--
BL-MW-4	4/1/1999	n/a	--	--	0.5	N	--	--	--	--	84	Y	--	--
BL-MW-4	7/1/1999	n/a	--	--	3.7	Y	--	--	--	--	1190	Y	--	--
BL-MW-4	10/1/1999	n/a	--	--	34.8	Y	--	--	--	--	7400	Y	--	--
BL-MW-4	12/1/2005	n/a	--	--	--	--	--	--	--	--	520	Y	--	--
MW-22	11/1/2005	n/a	--	--	3.83	Y	--	--	--	--	1220	Y	--	--
MW-22	12/1/2005	n/a	--	--	5.3	Y	--	--	--	--	1320	Y	--	--
Rhone Poulen														
W-18-D(64)	10/15/1990	N	--	--	3.6	Y	15.5	Y	125	N	50	Y	--	--
W-18-D(64)	3/21/2000	FD	3.14	Y	--	--	--	--	--	--	--	--	--	--
W-18-D(64)		N	4.78	Y	--	--	--	--	48	N	1	N	--	--
W-18-D(64)	9/19/2000	FD	1.83	Y	--	--	--	--	48	N	1	N	--	--
W-18-D(64)		N	2.32	Y	--	--	--	--	48	N	1	N	--	--
W-18-D(64)	6/18/2001	N	--	--	--	--	--	--	171	Y	6	Y	--	--
W-18-D(64)	4/4/2002	N	--	--	--	--	--	--	128	Y	1.95	N	--	--
W-18-D(64)	4/14/2004	N	3.06	Y	2.24	Y	--	--	54.9	Y	1.6	Y	--	--
W-18-D(64)	4/15/2005	N	2.84	Y	3.58	Y	--	--	999	Y	17.4	Y	--	--
W-18-I(55)	10/16/1990	N	--	--	1	N	18.4	Y	12.5	N	46	Y	--	--
W-18-I(55)	3/21/2000	N	1.95	Y	--	--	--	--	203	Y	1	N	--	--
W-18-I(55)	9/19/2000	N	1.42	Y	--	--	--	--	145	Y	4	Y	--	--
W-18-I(55)	6/18/2001	N	--	--	--	--	--	--	2020	Y	35	Y	--	--
W-18-I(55)	4/4/2002	N	--	--	--	--	--	--	1260	Y	18	Y	--	--
W-18-I(55)	4/14/2004	N	2.51	Y	2.39	Y	--	--	506	Y	30	Y	--	--
W-18-I(55)	4/15/2004	N	2.36	Y	3.57	Y	--	--	--	--	--	--	--	--
W-18-I(55)	4/15/2005	N	--	--	--	--	--	--	2830	Y	42.6	Y	--	--
W-18-S(30)	10/16/1990	N	--	--	1	N	34.5	Y	12.5	N	291	Y	--	--

Table C4.0-4. Arsenic, Barium, Iron, and Manganese Concentrations ($\mu\text{g/L}$) in Groundwater from Study Area Background Wells Identified by DEQ.

Well ID	Date	Sample Type	Arsenic				Barium				Iron		Manganese	
			Dissolved		Total									
			Concen- tration	Detect Flag										
W-18-S(30)	3/21/2000	N	2.05	Y	--		--		464	Y	72	Y		
W-18-S(30)	9/19/2000	N	1.01	Y	--		--		2690	Y	166	Y		
W-18-S(30)	6/19/2001	N	--		--		--		48	N	62	Y		
W-18-S(30)	4/4/2002	N	--		--		--		129	Y	103	Y		
Time Oil^a														
GW15-1	8/31/2001	n/a	--		7.05	Y	--		--		--		--	
GW17-1	8/31/2001	n/a	--		10	Y	--		--		--		--	
GW6-1	8/31/2001	n/a	--		19.3	Y	--		--		--		--	

Notes:

^a Total/dissolved not specified, treated as Total

DEQ - Department of Environmental Quality

FD - field duplicate

N - normal

n/a - sample type not specified in source report

Table C4.1-1. Kruskal-Wallis Test Results.

Analyte	p-value (All Sites)	p-value (Arkema Chlorate Plant Excluded)
Arsenic ^a	0.0218	0.3019
Barium	0.0047	0.0214
Manganese	0.2472	0.0863

Notes:

^a p-Value calculated assuming arsenic concentrations in samples with arsenic below the detection was 1/2 detection limit.

Table C4.2-1. Results of Mann-Whitney U-Tests.

Site	p-Value for Comparison of TZW to Nearshore Wells			p-Value for Comparison of TZW to Background Groundwater Wells		
	As ^a	Ba	Mn	As ^a	Ba	Mn
ARCO	0.214	0.808	n/a	0.007	0.0027	0.0009
Arkema	0.00030	n/a	0.543	0.082	0.0030	<0.00001
ExxonMobil	0.221	n/a	n/a	0.00002	0.0011	0.00003
Gasco	0.008	n/a	n/a	0.00003	0.0008	<0.00001
Gunderson	n/a	n/a	n/a	0.044	0.199	0.0067
Kinder Morgan	0.317	0.116	n/a	0.011	0.297	0.0023
Rhone Poulenc	0.101	n/a	n/a	0.00007	0.020	0.00023
Siltronic	0.013	0.052	0.063	0.444	0.0009	<0.00001
Willbridge	0.078	0.012	n/a	0.031	0.568	0.021

Notes:

^a p-Value calculated assuming arsenic concentrations in samples with arsenic below the detection was 1/2 detection limit.

n/a - Data not available for nearshore groundwater wells.

Bold - Indicates a statistically significant ($p \leq 0.05$) difference in concentration between TZW and nearshore groundwater.

TZW - transition zone water

Table C4.3-1. Literature Review of Iron and Manganese Oxide Content in Sediments.

Matrix	Location	Iron (% total)	Iron oxides (% total Fe) ^a	Amorphous Iron oxides (% total Fe) ^b	Manganese (% total)	Manganese Oxides (% total Mn)	Reference ^c
Suspended Sediment							
25 world rivers		4.5 +/- 0.2	43	NA	NA	NA	Poulton and Raiswell (2002)
2 U.S. rivers		3.4 +/- 2.1	51	28	NA	NA	Poulton and Canfield (2005)
8 world rivers		5 +/- 2	40	NA	0.09 +/- 0.03	61 ^d	Poulton and Raiswell (2000)
23 U.S. rivers		4.4 +/- 1.1	NA	NA	0.15 +/- 0.09	NA	Canfield (1997)
7 Locations in Willamette River		6.2 +/- 0.8	NA	NA	0.28 +/- 0.19	NA	USGS (1995)
River Bed Sediment							
11 Chinese rivers		3.6 +/- 0.9	NA	12	0.08 +/- 0.03	30	Wang et al. (1997)
6 U.S. rivers		2.5 +/- 1.8	NA	16	0.06 +/- 0.03	9	Horowitz and Elrick (1987)
3 Locations in Willamette River		4.5 +/- 1.4	NA	16	0.08 +/- 0.02	4	Horowitz and Elrick (1987)
19 Locations in Portland Harbor		3.4 +/- 2.1	NA	NA	0.07 +/- 0.02	NA	USGS (1989)
Lake Bed Sediment							
1 SRM (lake sediment)		2.6	47	18	0.05	16 ^d	Hall (1996)

Notes:

^a Iron oxides include hematite, magnetite, goethite, lepidocrocite, ferrihydrite.

^b Amorphous iron oxides generally include ferrihydrite, but may include lepidocrocite (depending on sequential extraction method).

^c Canfield, D.E. 1997. *Geochim. Cosmochim. Acta*. 61(16):3349-3365.

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^d Sequential extraction method designed to remove either amorphous or crystalline iron oxides (not selective for Mn-oxides).

Table C4.3-2. Calculated Saturation Indices for Important Minerals Affecting Arsenic, Barium, Manganese, and Iron Solubility in TZW.

Sample ID	Arsenic Minerals			Barium Minerals			Manganese Minerals		Iron Minerals		Calcium Minerals
	Realgar	Orpiment	Ba3(AsO4)3	Alstonite	Barite	Witherite	Rhodochrosite	Birnessite	Fe(OH)3	Siderite	Calcite
ARCO											
AR-01-A-TR	--	--	-3.02	-4.44	-1.11	-4.36	-0.01	-23.91	-2.92	0.82	-1.09
AR-02-A-TR	--	--	-3.75	--	--	--	--	-24.76	-2.80	--	--
AR-04-B-PR	--	--	6.11	--	--	--	--	-12.06	3.56	--	--
LWP1-ARC02B-PR	--	--	--	--	--	--	-0.83	-13.09	--	--	-1.73
LWP1-ARC02B-TR	--	--	--	--	--	--	--	--	--	--	--
LWP1-ARC03B-PR	--	--	--	--	--	--	-0.23	-12.02	--	--	-1.11
LWP1-ARC03B-TR	--	--	--	--	--	--	0.67	-13.51	--	--	0.00
LWP1-ARC06B-1-PR	--	--	--	--	--	--	-0.43	-12.37	--	--	-1.34
LWP1-ARC06B-1-TR	--	--	--	--	--	--	0.93	-12.83	--	--	-0.14
R2-AR-01-TR	--	--	-4.39	-3.23	-2.64	-3.69	0.29	-25.96	-3.56	1.52	-0.56
R2-AR-02-TR	--	--	-2.27	-3.01	-1.82	-3.61	0.84	-24.32	-3.00	1.38	-0.41
R2-AR-03-TR	--	--	3.67	-4.30	-2.17	-4.15	-0.22	-20.72	-0.95	0.49	-1.16
R2-AR-04-TR	--	--	-0.26	-3.56	-1.29	-3.91	0.32	-23.66	-2.30	1.21	-0.66
Arkema											
LWP1-AP04D	--	--	--	--	--	--	1.82	-10.52	--	--	0.86
AP-02-A-TR	--	--	-4.33	-3.03	-1.76	-3.67	1.08	-25.23	-3.29	1.69	-0.37
AP-03-A-TR	--	--	-5.25	-2.42	-1.65	-3.11	0.58	-26.35	-3.88	1.57	-0.32
AP-02-D-TR	--	--	--	--	--	--	--	--	--	--	--
AP-03-D-TR	--	--	--	--	--	--	--	--	--	--	--
AP-04-C-PR	--	--	4.00	-3.90	-2.62	-4.09	0.47	-11.03	3.38	0.37	-0.83
LWP1-AP03B-1	--	--	--	--	--	--	0.35	-14.40	--	--	-1.24
LWP1-AP04B	--	--	--	--	--	--	2.38	-8.89	--	--	1.56
R2-AP-01-PR	--	--	6.65	-0.83	-2.26	-2.25	0.47	-9.67	2.66	-1.03	0.40
R2-AP-02-TR	--	--	2.56	0.03	1.10	-1.80	1.21	-23.82	-2.95	1.40	0.82
CP-09-A-TR	--	--	6.59	-1.94	0.83	-2.42	0.01	-19.23	-2.62	-1.47	-0.53
CP-09-D-PR	--	--	10.27	-1.46	0.42	-2.29	1.29	-11.94	3.96	2.24	-0.18
LWP1-CP08D-1-PR	--	--	--	--	--	--	--	-11.89	--	--	--
LWP1-CP08D-1-TR	--	--	--	--	--	--	0.78	-14.21	--	--	-0.14
CP-06-A-TR	--	--	-3.04	-3.35	-0.89	-3.51	0.51	-23.23	-2.40	1.05	-0.85
CP-07-A-TR	--	--	5.97	-2.68	0.03	-3.12	-0.30	-19.94	-1.89	-0.41	-0.57
CP-07-B-TR	--	--	3.07	-2.82	0.80	-2.86	0.27	-21.41	-3.37	-0.71	-0.97
CP-08-B-TR	--	--	1.50	-4.12	-0.36	-3.94	-0.77	-19.94	-2.16	-0.89	-1.19
LWP1-CP10A	--	--	--	--	--	--	0.21	-12.75	--	--	-0.55
CP-07-D-PR	--	--	5.71	-2.70	1.02	-3.03	0.21	-13.43	0.68	-0.82	-0.68

Table C4.3-2. Calculated Saturation Indices for Important Minerals Affecting Arsenic, Barium, Manganese, and Iron Solubility in TZW.

Sample ID	Arsenic Minerals			Barium Minerals			Manganese Minerals		Iron Minerals		Calcium Minerals
	Realgar	Orpiment	Ba3(AsO4)3	Alstonite	Barite	Witherite	Rhodochrosite	Birnessite	Fe(OH)3	Siderite	Calcite
LWP1-CP06C-PR	--	--	--	--	--	--	--	-11.74	--	--	--
LWP1-CP06C-TR	--	--	--	--	--	--	-0.44	-15.84	--	--	-0.94
LWP1-CP07B-PR	--	--	--	--	--	--	--	-11.85	--	--	--
LWP1-CP07B-TR	--	--	--	--	--	--	-0.26	-13.08	--	--	-0.73
R2-CP-01-PR	--	--	9.44	-0.49	1.14	-2.17	1.92	-11.04	3.99	2.09	0.66
ExxonMobil											
EM-02-C-TR	--	--	-1.90	-3.85	-2.38	-4.09	0.48	-23.96	-2.58	1.27	-0.78
EM-04-C-TR	--	--	7.66	-1.85	-2.77	-3.09	1.61	-12.72	2.98	2.08	0.22
EM-06-B-TR	--	--	7.16	-3.55	-2.25	-3.90	0.47	-12.89	3.20	1.48	-0.67
EM-01-A-TR	--	--	1.53	-4.23	-1.39	-4.15	0.51	-21.62	-1.90	0.52	-1.10
EM-02-A-TR	--	--	3.73	-3.06	-1.58	-3.75	0.91	-21.11	-0.93	1.39	-0.32
EM-03-A-TR	--	--	6.94	-3.48	-1.19	-3.94	0.52	-12.41	3.22	1.21	-0.55
EM-04-A-TR	--	--	6.46	-2.98	-1.43	-3.59	0.53	-13.00	2.99	1.45	-0.40
EM-05-A-TR	--	--	6.13	-2.66	-2.80	-3.42	0.32	-13.87	2.64	1.59	-0.25
EM-08-A-TR	--	--	7.36	-3.09	-1.56	-3.69	0.88	-12.34	3.29	1.50	-0.41
R2-EM-01-TR	--	--	6.30	-2.99	-2.95	-3.63	0.82	-13.11	2.91	1.65	-0.37
Gasco											
GS-01-B-PR	--	--	3.84	--	--	--	--	-11.97	3.69	--	--
GS-02-A-TR	--	--	-20.01	-7.45	-0.39	-5.52	-2.53	-32.36	-7.74	-0.81	-2.94
GS-07-D-PR	--	--	6.77	-2.44	-2.32	-3.37	1.21	-12.03	3.52	1.80	-0.09
GS-08-A-TR	--	--	-3.24	-2.01	-2.64	-3.09	1.34	-24.92	-3.10	2.02	0.06
WLCGSG07GSB1	--	--	3.38	--	--	--	--	-12.71	2.64	--	--
WLCGSG07GSB2	--	--	3.20	--	--	--	--	-12.92	2.22	--	--
WLCGSG07GSB3	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSB4	--	--	5.09	--	--	--	--	-12.19	3.13	--	--
WLCGSG07GSB5	--	--	6.82	--	--	--	--	-11.78	3.48	--	--
WLCGSG07GSB6	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSB7	--	--	--	--	--	--	--	--	--	--	--
GS-08-D-TR	--	--	-5.39	-3.76	-2.91	-3.97	0.34	-24.94	-3.10	1.32	-0.80
WLCSLH01GP41	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP49	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP72	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP73	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSC1	--	--	--	--	--	--	--	--	--	--	--

Table C4.3-2. Calculated Saturation Indices for Important Minerals Affecting Arsenic, Barium, Manganese, and Iron Solubility in TZW.

Sample ID	Arsenic Minerals			Barium Minerals			Manganese Minerals		Iron Minerals		Calcium Minerals
	Realgar	Orpiment	Ba3(AsO4)3	Alstonite	Barite	Witherite	Rhodochrosite	Birnessite	Fe(OH)3	Siderite	Calcite
WLCGSG07GSC3	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSC4	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSC5	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSC6	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSC7	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSD1	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSD2	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSD3	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSD4	--	--	--	--	--	--	--	--	--	--	--
GS-07-B-TR	--	--	--	--	--	--	--	--	--	--	--
Gunderson											
GN-04-A-TR	--	--	-4.12	-3.45	-2.98	-3.92	0.60	-24.77	-3.07	1.44	-0.54
GN-05-A-TR	--	--	-4.12	-4.47	-1.89	-4.29	-0.25	-24.34	-2.87	0.93	-1.20
GN-01-E-PR	--	--	6.88	-1.58	-1.64	-2.90	0.37	-13.69	3.05	1.99	0.31
GN-02-E-PR	--	--	7.25	-1.77	-2.14	-2.99	1.15	-12.47	3.44	2.04	0.21
GN-03-A-PR	--	--	0.77	-6.99	-3.12	-5.60	-1.19	-15.09	1.41	-0.15	-2.41
GN-04-B-PR	--	--	0.16	-6.58	-4.20	-5.45	-1.01	-13.93	1.99	-0.17	-2.14
R2-GN-01-PR	--	--	7.48	-1.62	-2.25	-2.95	1.06	-13.23	2.97	2.05	0.32
Kinder Morgan Linniton											
KM-08-A-TR	--	--	4.35	-2.62	-1.52	-3.57	1.13	-20.77	-1.00	1.43	-0.07
R2-KM-01-TR	--	--	1.01	-3.37	-1.60	-3.96	1.12	-21.68	-2.33	0.69	-0.42
KM-06-A-PR	--	--	3.88	-3.81	-2.13	-4.11	0.07	-11.93	2.71	0.03	-0.71
KM-10-A-PR	--	--	6.11	-3.13	-1.93	-3.78	0.89	-9.54	3.06	-0.72	-0.36
KM-11-B-PR	--	--	4.48	-4.19	-2.89	-4.25	0.39	-12.85	2.86	1.04	-0.95
R2-KM-02-PR	--	--	8.55	-1.66	-2.27	-2.92	1.60	-10.43	4.29	1.76	0.25
R2-KM-02-TR	--	--	--	--	--	--	--	--	--	--	--
Rhone Poulenc											
R2-RP-01-TR	--	--	-4.02	-2.53	-2.87	-3.46	1.19	-24.79	-3.16	1.76	-0.09
RP-02-E-TR	--	--	1.99	-2.32	-1.12	-3.40	1.25	-22.07	-2.06	1.28	0.07
RP-03-C-TR	--	--	4.41	-1.73	0.35	-3.15	1.09	-21.63	-1.84	1.26	0.40
RP-03-E-TR	--	--	--	--	--	--	--	--	--	--	--
RP-07-B-TR	--	--	0.19	-2.15	-0.74	-3.20	0.68	-23.35	-2.96	0.81	0.04
R2-RP-02-TR	--	--	-1.39	-2.55	-2.45	-3.13	0.07	-24.96	-2.64	1.66	-0.43
R2-RP-03-TR	--	--	3.51	-5.51	-1.90	-4.96	-0.30	-19.83	-0.80	0.11	-1.56
RP-07-E-PR	--	--	7.98	-1.63	-2.41	-2.93	1.27	-10.60	4.12	1.49	0.29

Table C4.3-2. Calculated Saturation Indices for Important Minerals Affecting Arsenic, Barium, Manganese, and Iron Solubility in TZW.

Sample ID	Arsenic Minerals			Barium Minerals			Manganese Minerals		Iron Minerals		Calcium Minerals
	Realgar	Orpiment	Ba3(AsO4)3	Alstonite	Barite	Witherite	Rhodochrosite	Birnessite	Fe(OH)3	Siderite	Calcite
Siltronic											
WLCSLH01GP65	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP74	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSC9	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSD5	--	--	--	--	--	--	--	--	--	--	--
SL-01-A-TR	--	--	-5.04	-2.75	-2.73	-3.46	0.98	-25.56	-3.53	1.72	-0.30
SL-02-A-TR	--	--	-2.94	-4.09	-1.29	-4.13	0.49	-24.34	-2.92	1.15	-0.97
SL-03-A-TR	--	--	-0.85	-4.58	-1.36	-4.36	0.32	-22.79	-2.32	0.78	-1.23
SL-05-A-TR	--	--	-3.11	-3.01	-2.06	-3.59	1.02	-24.57	-2.96	1.63	-0.43
WLCSLH01GP47	--	--	--	--	--	--	--	--	--	--	--
SL-04-A-TR	--	--	-3.68	-4.36	-1.08	-4.22	0.17	-24.47	-2.96	0.93	-1.15
WLCSLH01GP46	--	--	--	--	--	--	--	--	--	--	--
SL-01-E-PR	--	--	9.65	-0.47	-2.80	-2.39	2.08	-8.80	4.71	1.42	0.90
SL-02-C-PR	--	--	7.50	-2.29	-2.27	-3.29	1.35	-11.79	3.69	1.89	-0.01
SL-02-E-PR	--	--	6.37	-2.34	-2.33	-3.35	1.15	-12.13	3.55	1.86	-0.01
SL-03-C-PR	--	--	7.00	-2.53	-2.58	-3.40	1.18	-12.16	3.46	1.80	-0.15
SL-03-F-PR	--	--	6.90	-2.47	-1.97	-3.37	1.11	-12.63	3.28	1.91	-0.11
SL-04-F-PR	--	--	6.18	-2.64	-2.28	-3.47	1.00	-12.79	3.23	1.88	-0.19
WLCSLH01GP38	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP39	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP40	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP42	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP43	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP44	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP45	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP48	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP50	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP51	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP52	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP53	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP54	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP55	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP56	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP57	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP58	--	--	--	--	--	--	--	--	--	--	--

Table C4.3-2. Calculated Saturation Indices for Important Minerals Affecting Arsenic, Barium, Manganese, and Iron Solubility in TZW.

Sample ID	Arsenic Minerals			Barium Minerals			Manganese Minerals		Iron Minerals		Calcium Minerals
	Realgar	Orpiment	Ba3(AsO4)3	Alstonite	Barite	Witherite	Rhodochrosite	Birnessite	Fe(OH)3	Siderite	Calcite
WLCSLH01GP61	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP62	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP63	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP64	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP66	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP67	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP68	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP69	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP70	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP71	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP75	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP76	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP80	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP81	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP82	--	--	--	--	--	--	--	--	--	--	--
WLCSLH01GP84	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSB8	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSB9	--	--	--	--	--	--	--	--	--	--	--
WLCGSG07GSC8	--	--	--	--	--	--	--	--	--	--	--
Willbridge											
R2-W-02-TR	--	--	-2.76	-1.67	-2.82	-3.05	1.38	-24.87	-3.08	2.08	0.37
W-09-A-TR	--	--	2.85	-5.50	-1.70	-4.93	-1.29	-16.08	0.39	-1.23	-1.58
W-12-A-TR	--	--	0.19	-3.80	-3.16	-4.07	0.52	-23.37	-2.21	1.41	-0.75
W-04-C-PR	--	--	8.70	-1.63	-2.44	-2.98	1.41	-9.74	4.20	1.04	0.34
W-06-A-TR	--	--	3.05	-5.36	-1.63	-4.83	-0.96	-15.52	0.60	-1.11	-1.54
W-07-C-TR	--	--	4.19	-5.27	-1.45	-4.70	-0.75	-18.18	-0.55	-0.67	-1.58
W-09-C-PR	--	--	5.36	-3.50	-2.50	-3.97	0.69	-13.09	2.77	1.37	-0.55

Notes:

-- Not predicted to potentially be present, or insufficient data.

TZW - transition zone water

Table C4.3-3. Matrix of Geochemical Model Scenarios and Selected Model Results.

Model Scenario	Goethite	Birnessite	Witherite	Barite	Rhodochrosite	Siderite	Maximum Concentration Predicted			
	(M)	(M)	(M)	(M)	SI	SI	Arsenic (µg/L)	Barium (µg/L)	Iron (mg/L)	Manganese (mg/L)
Base Case	0.0106	0.000467	5.0E-07	--	0.0	0.0	24	75	4.7	2.5
Scenario 1	0.053	0.0000934	5.0E-07	--	0.0	0.0	106	75	4.6	2.5
Scenario 2	0.00212	0.002335	5.0E-07	--	0.0	0.0	5.3	76	5.2	3.3
Scenario 3	0.0106	0.000467	2.1E-05	--	0.0	0.0	24	2886	4.7	2.5
Scenario 4	0.0106	0.000467	--	5.0E-07	0.0	0.0	24	75	4.7	2.5
Scenario 5	0.0106	0.000467	5.0E-07	--	1.0	0.0	24	75	4.5	24
Scenario 6	0.0106	0.000467	5.0E-07	--	0.0	1.0	24	75	14	4.1

Notes:

Indicates the model parameter(s) that has been varied relative to the base case model scenario.